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HOME ECONOMICS SERIES

LESSONS IN COOKERY

DIET FOR CHILDREN



BOOK THREE

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LESSONS IN COOKERY
DIET FOR CHILDREN



Courtesy of Mary Brockett, formerly Superintendent of the Mary Crane Nursery

CHILDREN AT THE MARY CRANE NURSERY [CONDUCTED BY THE UNITED CHARITIES OF CHICAGO]

The progress of children at the nursery gives ample proof that there is no substitute for milk in their diet and that milk and leafy vegetables (lettuce sandwiches in this case) are safety measures for children of all ages.

HOME ECONOMICS SERIES

LESSONS IN COOKERY

BOOK THREE DIET FOR CHILDREN

By

FRANCES ELIZABETH STEWART

Instructor in Home Economics, Robert Lindblom Technical High School, Chicago



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THE PREFACE

The greatest of woman's responsibilities is the bearing, nurture, and training of children. It is, then, to help keep alive among the young women of to-day the old-fashioned ideals that have proved their value—while by no means excluding new ideals and teachings—that this book is offered to the schools. The author, recognizing the physician's prerogative and responsibility in planning for children's diet, simply aims to foster in young women a desire for general intelligence in the feeding of children.

Diet for Children, which is a consideration of certain basic principles and a collection of typical recipes and menus for use in children's diet, aims to present them in a form simple enough to be grasped by school girls and to arouse their interest. The book contains, in addition to the introduction and the section pertaining to the mother's diet, six sections dealing with the diet for definite ages, arranged in sequence from birth through the high-school age. Typical, not arbitrary, recipes are given. The object has been to construct and classify the recipes according to certain organizing principles, the chief of which are evolution and food value. Evolution is the keynote of the book, in that the use, with each age, of foods and recipes a little more complex than those of the preceding age is shown. A list of suggestions for definite lessons precedes each section. The aim has been to include only such cooking lessons as may be of practical use in children's diet.

This volume, like the other volumes of the series, *Food Economy*, *Diet for Adults*, and *Diet for Invalids*, is designed primarily for the high-school student of home economics. It covers a semester's work, containing forty cooking lessons, two for each week of the semester. No less time than two fifty-minute or two sixty-minute periods is recommended for each lesson. The lessons are planned according to foods in season from September to February. The Appendix contains optional work (chiefly chart and experimental problems) to be assigned at the discretion of the teacher as either recitation or home work. It is not imperative that the topics or lessons be presented in the sequence given; season and market conditions often necessitate a change. The lessons in *Diet for Children* are simple and call for less expensive ingredients, on the whole, than the lessons in the other three books of the series. The school may reduce expense by having the pupils bring from home many ingredients, such as fruits for use in fruit salads and desserts. The author has found that the use of certain materials from home adds greatly to the pupil's interest in the lessons.

The book is in condensed and summarized form, permitting rapid reading, and has been kept as simple as possible. The aim has been to give the recipes in a form that will develop initiative and responsibility in the pupil. The author hopes that the book, whether used in the school or in the home, will be an aid to that kind of teaching which helps the

student to help herself. The author believes in individual rather than group work for the pupil. The class recipes will be found helpful, especially to beginning teachers, and they may also have two uses in the home: as a trial, or test, recipe for the housewife and as a means of teaching a child of almost any age to cook. Mother and daughter may work at the same time with their respective large and small recipes. Those teachers are fortunate who may coöperate with a school lunchroom, thus being able to demonstrate to the pupils the use of foods for children of various ages.

The lessons in the other three books of the series are also arranged in sequence according to foods in season: Book One, September to February; Book Two, February to June; Book Four, February to June. The four books cover a two-year course. Each book is a unit in itself; therefore it is not necessary to teach the entire series to a given class of pupils, although it is very desirable to do so. The series is recommended for use by either the younger or the older girls in high school. The author believes, however, that the more mature mind is better fitted for a study of dietetics.

The recipes in the four books have been carefully tested. While the recipes in the last two books are to be used specifically in children's and invalids' diets, yet most of them may also be used with normal adults.

Each of the four books is also published in the form of a loose-leaf "filler" suitable for class use. Loose-leaf books offer greater flexibility for the teacher and student, having already proved their value in the botanical and other high-school science laboratories. Such books form a framework for the teaching of any given course, and are time-savers, for the pupil is spared the mechanical copying of such material as charts and recipes. As a sheet is required for a lesson, it is removed from the filler and placed in an inexpensive notebook cover. A loose-leaf laboratory book is distinctly a pupil's book, not a teacher's. Some scheme should be devised for keeping the recipe sheets clean during the lesson period; one way is to post a few extra copies on the wall of the laboratory. The loose-leaf plan allows the teacher to add experimental work if she thinks best, and it also provides space for additional recipes, mounted illustrations, or clippings from newspapers and magazines.

It is hoped that all of the volumes will prove useful to homekeepers. The bound books may be preferred by housewives, the loose-leaf by school girls.

The series is an outgrowth of a number of years' teaching experience in the Wendell Phillips and Murray F. Tuley High Schools of Chicago. In addition, three years were spent by the author as critic teacher of grade cooking in the Chicago Normal School.

The author wishes to acknowledge her indebtedness to Professor Mary D. Chambers, B.S., A.M., and Dr. A. D. Emmett (in charge of the nutritional investigations in the biological research laboratories of Parke Davis & Company) for their valuable criticism of manuscript and proofs. Recognition is made of the training received at Pratt Institute. Finally, the author wishes to express gratitude to her pupils, whose industry and enthusiasm have given the impetus for the development of the series.

F. E. S.

PART I
INTRODUCTION

"Feed a growing child properly and you have helped to make a good citizen. Every child has the right to a useful body and mind, but in order to have either he must be given the right kind of food at the proper time."—MARY SWARTZ ROSE, "The Feeding of Young Children," *Technical Education Bulletin No. 3*, Teachers College, Columbia University.

DIET FOR CHILDREN

GENERAL INFORMATION

TABLE OF ABBREVIATIONS

spk. = speck	pk. = peck	sec. = second
d. = drop	oz. = ounce	min. = minute
ssp. = saltspoon	lb. = pound	hr. = hour
t. = teaspoon	pkg. = package	C. = calorie
tb. = tablespoon	h. = heaping	°C. = degrees Centigrade
c. = cup	b. p. = baking powder	°F. = degrees Fahrenheit
pt. = pint	tt. = test-tube	
qt. = quart	" = inch	

/ denotes a fraction: $\frac{1}{2}$ c. = one-half cup

- denotes gradation: 1-2 c. = 1 to 2 c.

TABLE OF MEASURES

dash = one sprinkle	4 c. = 1 qt.
4 ssp. = 1 t.	2 c. butter = 1 lb.
3 t. = 1 tb.	4 c. flour = 1 lb.
16 tb. = 1 c.	1 egg = 4 tb.
2 c. = 1 pt.	

TABLE OF OVEN TEMPERATURES¹

OVEN	°F.	°C.
Slow	250-350	(Pupil to supply)
Moderate	350-400	
Hot, or "quick"	400-450	
Very hot	450-550	

MISCELLANEOUS STATEMENTS

1. Unless otherwise specified, all bulk measurements are level. All leveling of ingredients in cups, spoons, etc., should be done with the flat side of a spatula, not the edge. Why?

2. Possible reasons for discrepancies which may arise in the recipes are:

- Lack of standardization as to the size of spoons, measuring cups, etc. (Most saltspoons sold are not of standard size.)
- Varying degrees to which flour and other ingredients are packed.

¹Technical Education Bulletin No. 22, Teachers College, Columbia University, "Some Attempts to Standardize Oven Temperatures for Cookery Processes," by Van Arsdale.

3. The following rules¹ concerning flour mixtures should be observed:

- a. Measure flour for baking purposes after the first sifting; this rule applies as well to the quantity of flour mentioned in all standard cookbooks.
- b. Dip flour lightly into a cup by spoonfuls; do not pack by scooping with the cup or shaking the cup; aim to *keep* the flour light. In measuring a fraction of a cup, level with a spoon, do not shake. Rules *a* and *b* apply also to certain other dry ingredients which pack easily, such as powdered sugar.
- c. Pastry and bread flours may be used interchangeably in all recipes, as desired, but note that less liquid is required with pastry than with bread flour; an average rule is to allow $1\frac{1}{8}$ c. pastry flour to 1 c. bread flour. Brands of both bread and pastry flours vary greatly as to their requirements for liquid, hence no set rule can be given.
- d. The first figure of the ratios 1:1, 2:1, 3:1, etc., as applied to flour mixtures = flour; second figure = wetting.
- e. In all recipes, sour milk and soda may be substituted for sweet milk and baking powder.

4. In general, the term "fat" as used in this book means butter or a substitute. (See page 10, Note 6.)

5. In most cases, the class recipe is placed at the left of the corresponding large recipe.

6. As a rule, all class recipes should be cooked more quickly than the large recipes, proportionately speaking; otherwise they dry out. This applies particularly to the cooking of meats and to baking in general.

7. Note directions for changing °C. to °F., and vice versa (parentheses are used in the second statement, but not in the first):

$$\frac{9}{5}^{\circ}\text{C.} + 32 = ^{\circ}\text{F.}$$

$$\frac{5}{9} (^{\circ}\text{F.} - 32) = ^{\circ}\text{C.}$$

8. The term "calorie," as used in this book, means the greater calorie, that is, the amount of heat required to raise the temperature of 1 kg. of water 1° C.; this is very nearly the same as the heat required to raise 4 lb. of water 1° F.

9. *To the Teacher:* Opportunity is given in this book for teaching the principles underlying the preparation of carbohydrate, fatty, and protein foods, such as:

STARCH	SUGAR	FAT	PROTEIN
Gruels	Candies	Charlottes	Eggs
Cereals	Fruits, stewed		Fish
Vegetables			Gelatin
Flour mixtures			Meat
			Milk

¹ Detailed rules and notes on flour mixtures, preceded by a classification of flour mixtures, are given in *Diet for Adults*, pages 37-41.

BIBLIOGRAPHY FOR FEEDING OF CHILDREN

Care of Children Series, Children's Bureau, U.S. Department of Labor:

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No. 2, *Infant Care*, by Mrs. Max West.

No. 3, *Child Care, Part I, The Preschool Age*, by Mrs. Max West.

No. 4, *Milk, the Indispensable Food for Children*, by Dorothy R. Mendenhall.

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ENERGY REQUIREMENTS OF CHILDREN

Children, for the following reasons, require an abundance of food:

- Rapid growth necessitates tissue-building foods (see pages 7-10).
- Incessant activity (play and work) necessitates an abundant supply of energy-producing foods.
- Loss of body heat (which is greater than in adults) necessitates energy-producing foods.

The following table, adapted from Sherman,¹ states the average daily energy requirements of children of normal size, development, and activity:

AGE IN YEARS	TOTAL CALORIES
1-2.....	900-1,200
2-5.....	1,200-1,500
6-9.....	1,400-2,000
10-13.....	1,800-2,200
14-17 (girls).....	2,200-2,600
14-17 (boys).....	2,500-3,000

Notes:

1. One must remember in using the calorie that it measures only the energy value of food. It is not sufficient merely to see that the child secures the needed number of calories. A five-year-old could secure 1,200 calories from sugar alone, but that child would not grow. It must have a mixed diet containing proteins, fats, sugars, starches, mineral salts, and vitamins.

2. "The fuel value of children's dietaries should always be liberal in order to provide amply for muscular activity and for a more intense general metabolism than that of the adult, as well as because throughout the period of growth the food must supply a certain amount of material to be added to the body in the form of new tissue in addition to all that which is oxidized to support metabolism."²

3. Children require more food in proportion to their size than do adults.

To note that the average requirements for children differ from those for adults—

- Compare Sherman's table above with *Diet for Adults*, page 5, Note 1.
- Study the following table (Mary Swartz Rose, *Feeding the Family*, page 242):

ENERGY REQUIREMENTS OF THE FAMILY

MEMBER OF FAMILY	AGE	WEIGHT, POUNDS	PROTEIN CALORIES*	TOTAL CALORIES
Man.....	40	154	277-415	2,770
Woman.....	37	125	225-338	2,250
Baby.....	1	21	84-126	840
Boy.....	3	35	140-210	1,400
Girl.....	6	41	139-208	1,394
Girl.....	9	56	184-276	1,848
Boy.....	12	75	225-338	2,250
Woman.....	90	110	150	1,500
Total.....			1,424-2,061	14,252

*Allowing 10 to 15 per cent of total fuel in the form of protein, which will be sufficient to cover all nitrogen requirements.

¹ Sherman, *Chemistry of Food and Nutrition*, page 172.

² *Ibid.*, page 173.

ESSENTIALS OF DIET FOR GROWTH IN CHILDREN*I. Proteins, foods rich in (see Notes 1-5):*

Milk (casein and lactalbumin)
 Eggs (ovalbumin and ovovitellin)
 Wheat (gliadin and glutenin)
 Corn (zein and glutelin)
 Meat (myosin)

II. Vitamines, foods rich in (see Note 6):

Fresh milk	}	Water-soluble, chiefly
Seeds		
Grains		
Citrous fruits		
Tomatoes		
Tubers		
Butter	}	Fat-soluble, chiefly
Cream		
Eggs		
Green leaves		
Beef fat		

III. Mineral elements, foods rich in (see Notes 7, 8, 9):

Eggs	}	Iron and chlorine
Meat		
Milk	}	Calcium
Egg yolks		
Oatmeal		
Beans		
Oatmeal	}	Phosphorus and magnesium
Cracked wheat		
Beans		
Peas		
Milk		
Eggs		

IV. Carbohydrates, foods rich in } See outline on energy requirements of
V. Fats, foods rich in } children, page 6

*VI. Water**Notes:*

1. Particular care is necessary in the feeding of growing children. The following foods are especially adapted to promoting growth in children (see Notes 2, 3, 4):

Whole milk
 Eggs
 Whole-grain cereals (such as rolled oats, rolled wheat, or shredded wheat)

2. "Why is milk a good food?"

"a. It is a cheap source of protein, or [tissue-] building material. The proteins found in milk are especially good for growing children and for invalids, because they are easily assimilated [and are what we call complete proteins]. It has been estimated that, to supply protein, milk at 15 cents a quart is as cheap as sirloin steak at 35 cents a pound or eggs at 38 cents a dozen.

"b. It contains two substances which yield energy, but which also have especial value:

"(1) Milk-sugar is believed to be useful in checking putrefactive changes in the large intestine. The special value of buttermilk is now thought to be due to the milk-sugar in it.

"(2) The fat of milk contains an unknown substance [vitamine] believed to be absolutely necessary for the growth and health of human beings.

"c. It is rich in mineral matter.

"(1) At 8 or 10 cents a quart it is the cheapest possible source of lime. The lime in milk is in the best form for children, who must have lime for the proper growth of their bones.

"(2) It is also rich in phosphorus.

"(3) It is low in iron, but its iron is believed to be in a very available form. It is valuable to use when the blood is low in iron, because the lime is thought to increase the ability of the body to use iron from other sources.

"d. It contains the two unknown substances [sometimes] called 'vitamines,' without which growth and health seem to be impossible.

"(1) One of these is soluble in fat. Skim-milk contains one-half as much as whole milk. It is, therefore, better to use skim-milk than no milk.

"(2) One of these is soluble in water and hence is found in skim-milk as much as in whole milk.

"How much milk shall be used?"

"Graham Lusk says that a family of five, consisting of father, mother, and three children aged from 3 to 12, should buy and use three quarts of milk daily before buying one pound of meat.

"The minimum allowance for a child up to 8 years or even 12 years is one pint daily. A quart is *desirable*. Adults may be stinted if necessary, but children need milk."¹

"Especially in the feeding of children should milk be used freely, because of its many advantages as a 'tissue-building' and 'growth-promoting' food. 'A quart of milk a day for every child' is a good rule easy to remember."²

In what ways may milk be served to children?

Beverages (see pages 90-94)

Cream soups (see pages 56-64)

Desserts made on a milk basis (see pages 95-101)

¹ Circular No. 27, Extension Service, New Hampshire College of Agriculture.

² Sherman, *Food Products*, page 81.

Miscellaneous dishes:

- Bread and milk
- Cereals (cooked in milk)
- Savory custards and soufflés
- Creamed dishes (thin white sauce or milk poured over vegetables, etc.)
- Gravies, plain
- On cereals and in gruels
- On mild fruits (such as berries or baked apples or pears)

(All foods in the foregoing list are especially useful in the diet of the child who does not like milk as a beverage.)

3. Eggs are richer than milk in iron. Because of their richness in iron (as well as the nature of the fats and proteins), eggs are among the first foods to be added to the milk diet of a young child. Nearly all of the iron in eggs is found in the yolks.

Every child should be given an egg daily. If prices make such an allowance impossible, the child should be given at least three eggs weekly; in this case the diet should contain an increased quantity of other foods rich in iron (such as spinach served in purée, etc.).

The following egg recipes are allowable for children 2 to 8 years of age:

- Eggs soft-cooked in the shell (either coddled or boiled)
- Soft-poached eggs
- Soft-scrambled eggs (containing little or no butter or cream)

For children over 8 years of age omelets (if tender and not greasy) and various other simple egg recipes are allowable; see pages 74-80.

Eggs cooked as follows are not easy to digest and should not be given to young children:

- Fried
- Sautéed
- Hard-boiled

4. Note the following points with regard to breakfast cereals:

- a. Cereals are among the essential foods of childhood. The whole-grain cereals (because richer in mineral elements, etc.) are better body-builders than cereals with the bran removed. Rolled oats are sometimes asserted to be especially valuable in the stimulation of growth. Coarse and fine hominy grits are very nearly pure starch; hominy, or "hulled corn," is the whole kernel, including the germ, and because of the germ has a higher fat, protein, and vitamin value than grits (hence hominy is better than hominy grits for use in the feeding of children).
- b. Thorough cooking of cereals is essential. This is especially true of coarse cereals (those containing much cellulose).
- c. Cereals should be well masticated, hence the following inducements for mastication should be offered:
 - (1) Avoid (by not using too much water in the cooking) a cereal that is very "mushy," soft, or pasty; a cereal should be stiff enough to necessitate a certain amount of chewing.
 - (2) Have the child eat something solid with cereals.
- d. Strain cereals for feeding very young children (infants).

5. Protein foods are essentially composed of a combination of various amino-acids.¹

¹For further discussion of amino-acids, see H. C. Sherman, *Food Products*, page 12; P. B. Hawk, *Practical Physiological Chemistry*, 6th ed., page 63.

Selection of protein foods should be based upon their ultimate amino-acid content, since some protein foods (such as gelatin) do not promote growth or do not maintain the body owing to a lack of the proper amino-acids.

6. Butter substitutes, such as butterine, should not be used to any extent in children's diet unless plenty of whole milk or cream is given in the diet. The fat-soluble vitamine, so vital in the growth of children, is present in dairy butter, but it is lacking in many of the butter substitutes. Margarine containing considerable beef fat have a higher content of the fat-soluble A vitamine than those made chiefly of nut or other vegetable oil. The fat-soluble vitamine in butter is not destroyed by cooking (or at least only to a slight degree) unless the butter is browned, or heated to the smoky-hot stage.¹

7. In the selection of foods from the standpoint of their mineral content, special care should be taken to have the acid and basic elements balanced. (See *Diet for Invalids*.)

8. With older children a diet selected from the following is very likely to contain enough mineral matter for growth:

Milk

Vegetables

Fruits

Graham bread

Milk and some form of fruit and vegetable should be included in every meal.

9. Note the probable results of a lack of calcium (lime) in the diet:

Weak bones

Weak teeth

Calcium is indispensable for the growth of bones and teeth; poor teeth, as well as weak tissues in general, often result from a poor supply of milk and other foods rich in calcium.

The condition of the second set of teeth depends very largely on the kind of food taken during the years immediately preceding second dentition. The following are essentials for the period of second dentition, namely, the *major period extending from the sixth year to the end of the thirteenth year*:

a. Plenty of milk and other foods rich in calcium (such as oatmeal, egg yolks, dried beans and peas, carrots, almonds, peanuts, and walnuts)

b. Hard or fibrous foods for promoting mastication, such as:

Tough or dry bread

Educator crackers

Zwieback

Meat

If the gums are tender during the early part of the period of second dentition, hard foods should be avoided.

The following are among the foods low in calcium:

Candy

Meats

Cereals (corn the lowest in calcium)

Potatoes

Corn meal, new-process

Rice, polished

Flour, patent (fine wheat flour)

Roots

10. Note requisites in children's diet (most of these pertain to the diet of adults as well):

Regular meals

Simple foods (good in quality, simply cooked, and easily digested)

Plenty of food

Mixed diet

Thorough mastication

Plenty of water (no ice water) (Water may be drunk at meal-time if it does not interfere with mastication.)

¹ Deducted in part from McCollum and Davis, *Journal of Biological Chemistry*, XIX (1914), and Osborne and Mendel, *ibid.*, XX (1915).

TIME FOR THE INTRODUCTION OF VARIOUS FOODS INTO CHILDREN'S DIET

THE FEEDING OF OLDER INFANTS

The following rules are quoted by Mrs. Max West (*Infant Care*, page 49) from the report¹ of a committee of the American Medical Association:

Unless a child has loose bowels he should be given from 1 to 3 tablespoonfuls of strained fruit juice once a day after he is 7 or 8 months old.

After he is 9 months old he may be given squeezed beef juice, beef tea, or plain mutton or chicken broth once a day.

When he is 10 months old he may have part of a soft egg, a small piece of crisp toast or zwieback, or a crust of bread to chew immediately after his feeding.

Other solid foods should not be given during the first year.

At 12 months he may take his milk undiluted, and strained cereal may be given twice a day.

During the second year the child should have four meals a day. Hours: 6:00 A.M., 10:00 A.M., 2:00 P.M., 6:00 P.M. Nothing but water should be allowed between his meals.

At 12 months the baby should be weaned from the bottle and taught to drink milk from a cup. He may then have cereals twice a day, which should be thoroughly cooked, and for the first two or three months they should be strained. He should have 4 cups of milk daily.

When 15 months old he may have at first a teaspoonful, later 1 tablespoonful, of rare scraped beef, mutton, or chicken.

When 18 months old he may have one-half of a mealy baked potato daily.

When 2 years old he may have most of the fresh green vegetables when thoroughly cooked and finely mashed.

The juice of fresh fruits may be given after 12 months.

Cooked fruit, such as baked apple or apple sauce, should be given once a day after a child is 18 months old; it should at first be strained.

Stale raw fruits are especially dangerous in the city and in the summer.

Mrs. West, *Infant Care*, page 49, makes the following statement:

"Begin with a very small quantity of each new food, noting carefully the effect on the baby, and strengthening it slowly as required. For instance, begin by giving 1 teaspoonful of fruit juice, diluted with an equal quantity of water, and increase gradually until the proper amount for the given age is reached.

"Beef juice is chiefly valuable as a stimulant. It has but little food value and is not to be given in the place of nourishing food but as an addition to it. Two teaspoonfuls diluted with an equal quantity of water may be given fifteen minutes before the midday feeding, beginning about the ninth month. If the baby is delicate, it may be begun as early as the fifth month in half the above quantity.

"Only one new article should be added to the baby's diet at a time, and the effect on the baby should be carefully noted."

¹*Save the Babies*, prepared for use in Baby Health Conferences for the Committee on Public-Health Education among Women, by Drs. L. Emmett Holt and Henry L. K. Shaw. Council on Health and Public Instruction, American Medical Association.

FOODS FOR CHILDREN

The following summary of foods to be given children from the second to the eighteenth year is taken from *Extension Circular No. 37*, New Hampshire College of Agriculture and the Mechanic Arts and the United States Department of Agriculture cooperating:

Second to Twelfth Year

Milk. Three cups to one quart daily.

Sugar. None needed in second year. Third and fourth years used for flavoring. From fifth on used in moderation. Candy only at end of regular meals.

Water. Used in abundance.

Cereals. At first, jelly made by straining well-cooked cereal. This was begun at 10 months. At 15 months unstrained cereals used, beginning with finer ground cereals. Hot, cooked, for breakfast. Oatmeal especially good.

Fruits. At first, strained orange juice. This was begun at 7 months. Other mild juices, juice and pulp, cooked or raw, of mild fruits next used. At 5 years, cooked fruits; raw fruits introduced cautiously (not bananas). From 8 years on, fresh, cooked, or dried fruits.

Eggs. At first, soft cooked yolk, not more than one daily. This was begun at 10 months. White introduced cautiously between the first and second years. At 3 years, one whole egg daily. From 8 years on, not more than one egg daily.

Bread. At first, stale crust or hard cracker (begun at 10 months), changing during the second year to stale dry bread, zwieback, or crackers. At 2 years, dry hard bread. At 5 years, dry bread at least twenty-four hours old.

Vegetables. At 18 months, mild vegetables strained or in soup. At 2 years, cooked, chopped or mashed mild vegetables. New ones introduced cautiously. At 8 years, any cooked vegetables. After tenth year raw vegetables.

Dried legumes. (Beans, peas.) At 2 years, strained in soups. At 5 years, in soups or mashed. At 8 years, in soups, well cooked.

Potatoes. At 2 years, baked. At 5 years, baked, boiled, creamed, or mashed. At 8 years, various methods.

Butter. From 2 years. Best fat for children.

Desserts. At 2 years, simple combinations of milk, cereal, eggs, fruits, bread and a little sugar. At 5 years, add sponge cake, milk sherbets, plain ice cream. From 8 years on, simple cake, puddings, frozen dishes, *candy at meals*.

Cocoa. At 5 years, very weak. (Use not more than $\frac{1}{2}$ teaspoon cocoa to 1 cup milk.) At 8 years, not too strong.

Meat. At 8 years, small quantity.

Nuts. At 8 years, peanut butter and nut paste.

Adolescent Child Twelve to Eighteen Years¹

Simple food, easy to digest. Main part of diet, milk, cereals, eggs, vegetables, simple salads, and fruit. Pastry and sweets used sparingly. Tea and coffee avoided.

¹For further data see Rose, *Feeding the Family*, "Food in Adolescence and Youth," pages 162-183.—AUTHOR'S NOTE.

SEQUENCE IN FEEDING: A SYNOPSIS

This table aims to show that solid foods should be introduced very gradually into children's diet. There should be a definite sequence from liquids, through semi-solids, to solids.

KIND OF FOODS	LIQUIDS: FOODS WITHOUT FIBER (For very young children*)	SEMI-SOLIDS: FOODS WITH A LITTLE FIBER OR BODY (For children somewhat older†)	SOLIDS: FOODS WITH ENOUGH FIBER OR BODY TO DEVELOP THE POWERS OF MASTICATION (For still older children‡)
Starchy foods	Cereal gruels mixed with milk	Cereal jellies Unstrained cereals	Bread crumbs, toasted Crusts Zwieback Educator crackers Etc.
Fruits	Strained fruit juices	Fruit pulp Cooked fruits, mashed	Whole fruits
Vegetables	Strained vegetable pulp mixed with milk or water	Mashed (not strained) vegetables	Whole vegetables
Fats	Rich milk (whole)	Thin cream Butter	Solid fats composed chiefly of butter
Meats (if allowed; see Note 4) and eggs	Meat broth Meat juice Albumin water	Scraped meat Coddled eggs (whole)	Meat, finely chopped Boiled or poached eggs

* Generally speaking, children 1-2 years of age.

‡ Generally speaking, children 4-8 years of age.

† Generally speaking, children 2-4 years of age.

Notes:

1. *Most important rule in the feeding of young children:* Gradually develop the digestive powers of children, training the digestive organs by degrees to take care of solid foods, including those containing the indigestible fiber, cellulose. The habit of mastication is not acquired all at one time. The time for the introduction of various foods depends chiefly upon the state of development of the teeth. Children of one year are cutting teeth, hence they need something on which to bite, such as dry toast.

A safe rule in feeding a baby is to add but one new food at a time.

The foregoing synopsis is of value in invalids' diet as well as in children's diet. Coarse fiber, since it irritates the digestive organs, should be avoided in the diet of very young children and by adults of weak digestion. Hence, in feeding the youngest children, note the value of cooked foods, especially those in the form of pulp or juice.

2. Fruits, vegetables, and cereals containing much coarse cellulose (skin, seeds, etc.) should be avoided in the diet of young children; raw fruits with skins (apples, peaches, etc.) should be pared or peeled before being offered in the diet.

Fruit pulp may be obtained either by scraping ripe, raw fruit (such as apples and peaches), or by mashing cooked fruit or putting it through a sieve.

The cooking and straining of fruits, vegetables, and cereals make them more digestible; children frequently suffer from diarrhea if the cellulose is not softened or removed.

Raw vegetables (celery, cabbage, radishes, onions, cucumbers, tomatoes, etc.) should not be given to children under 10 years of age.

3. The best way to feed children fats is to give them the following:

- Milk, whole
- Cream (on cereal, etc.)
- Butter
- Yolks of eggs

In addition to the above, the following fatty foods are sometimes allowable for the older children:

- Bacon, fat
- Butter substitutes, simple (such as nut margarine)
- Chocolate (taken as a beverage or as a sweet)
- Oil, cod-liver
- Oils, vegetable (corn, cottonseed, olive, etc.)

Note the following points in regard to animal (meat) fats:

- a. Children are very likely to dislike them.
- b. Children do not digest them as a rule. (Animal fat is not in the form of an emulsion, and is not so easily digested as those fats which are in an emulsified form, such as the fat of milk and egg yolks.)

4. Authorities differ in opinion as to the age at which meat should first be given children. Opposing opinions are stated in *a* and *b* below; it is probable that *a* expresses the wiser opinion.

- a. Some authorities advise no meat (as well as no beef juice or meat broth) for children under 7 or 8 years of age, *provided a liberal quantity of eggs and milk is used in the diet*. It is possible to obtain sufficient protein from eggs and milk. The following quotations from Mary Swartz Rose are worthy of notice in this connection:

- (1) "With milk freely supplied and an average of one egg a day, there is no call for the introduction of meat into the diet until after a child is 7 years old, and, on the other hand, there are several good reasons for withholding it during these early days."¹
- (2) "Excepting the point in regard to mastication, what is true of meat is true of *beef juice*. Its use is best restricted to babies who for some reason cannot have an adequate supply of milk, egg yolk, and fruit juice, or who are sick enough to need a stimulant. Meat broths are of course merely stimulating, and their only possible virtue in the ordinary child's dietary is to induce the eating of cereals or vegetables which may be cooked in them, and this can usually be accomplished in some other way. They almost inevitably limit the amount of milk taken, and therefore should be reserved till the child is older, his need of materials for growth less pronounced, and his total capacity for food greater."²

¹ Mary Swartz Rose, *Feeding the Family*, page 139.

² *Ibid.*, page 140.

- (3) "Knowing that milk and egg yolk, which are no trouble to prepare, are better for little children than beef juice, shall we not save ourselves labor and often expense?"¹
- b. Other authorities advise the use of the following (in addition to eggs and milk) in the diet of young children:
- (1) Beef juice (see recipe, page 39)
 - (2) Meat broth (see recipe, page 38)
 - (3) The more easily digested meats and fish (see recipes, pages 81-86), such as:
 - Beef (broiled, roasted, or boiled)
 - Lamb chops
 - Chicken (especially the light meat)
 - Fish of delicate texture and not fat, such as whitefish
- It is generally agreed that beef, lamb, and chicken as listed above are the *first solid meats* to be given children, no matter what the opinion may be as to the *age* when meat shall first be given.
- All meat should be free from bone, gristle, skin, and fat, and should be finely minced.

- c. The following are the chief arguments against the use of meat for young children:
- (1) Meat seems to be more subject to putrefaction in the intestines than any other protein food.
 - (2) Meat contains stimulating substances not needed by children. (Meat broth and beef juice, as well as solid meats, contain stimulating substances.)
 - (3) Meat (because so high in flavor) is likely to take away the appetite for milk and certain other mild-tasting foods which are essential to growth.
- d. The following are the chief advantages of meat in the diet of young children:
- (1) It is a useful source of iron.
 - (2) It helps to develop the power of mastication.

Those opposed to the use of meat for young children offset the foregoing advantages of meat by substituting the following foods for meat:

Egg yolks and green vegetables (as sources of iron)
 Dry breadstuffs (for training in mastication)

5. Sequence in flavors is essential in children's diet:

- a. Mild-flavored foods only should be given to very young children.
- b. Stronger-flavored foods, such as certain vegetables, may gradually be introduced into the diet.

Very strong flavorings (condiments, seasonings, etc.) should be avoided at all times; cloves and pepper often seem especially objectionable. Paprika, mild as it is, should be avoided in the diet of young children.

Normal children possess a keener relish for mild foods (milk, cereals, bread and butter, etc.) than do adults, hence beware of dulling this highly developed sense of taste in children by giving them foods too strongly flavored.

¹ *Ibid.*, page 195.

FOODS OBJECTIONABLE IN CHILDREN'S DIET

The following foods are usually objectionable in children's diet:

Breadstuffs, soggy or heavy, such as (see Note 3):

Breads, rolls, and biscuits

Cakes

Dumplings

Griddlecakes

Puddings (steamed puddings, etc.)

Cheese, except cottage cheese (see Note 1)

Fruits, overripe (peaches, etc.)

Fruits, underripe (such as bananas, eaten raw)

Lobsters and crabs

Milk in combination with strongly acid foods (such as tomatoes, strawberries, or plums)

Nuts (see Note 1)

Pickles (vinegar is objectionable)

Vegetables, raw (see page 14, Note 2)

Foods containing many nuts or dried or candied fruits, such as:

Fruit cake

Nesselrode pudding

Foods containing much sugar, especially if they are eaten in excess (see Note 4), such as:

Cakes (such as those made with much filling or icing)

Candies

Cereals served with excess sugar

Pie fillings

Preserves and some canned fruits

Puddings, rich

Sauces, pudding

Sirups

Foods containing much fat (especially overheated fat), such as:

Cakes, rich

Fish containing much oil (mackerel, salmon, etc.; see page 86, Note 3)

Fried foods (doughnuts, potatoes, meats, etc.)

Gravies, meat (except platter gravy)

Meats, such as:

Duck

Goose

Pork (except bacon, with older children)

Sausage

Pastries (pies, etc.)

Puddings, rich

Salads, rich (such as meat or fish salads containing mayonnaise)

Sauces for puddings and vegetables

Foods containing many condiments and high seasonings (spice, pepper, herbs, etc.), such as:

- Deviled meats and fish
- Pickled meats and fish
- Rich sauces and gravies for meat and fish
- Meat and fish pastes (for sandwich fillings, etc.)
- Meat and fish forcemeats
- Stuffings for meat, poultry, and fish
- Canapés
- Thousand-island salad dressing

Foods containing much flavoring, coloring, or harmful preservative material, such as:

- Some canned fruits and jellies
- Some catsups
- Some orangeades
- Impure and highly colored candy

Notes:

1. Nearly all, if not all, the foods in the foregoing list should be *forbidden* children. However, certain foods (mild cheese, nuts, unstrained green corn, etc.), not digestible for young children, are often permissible with older children. See page 15, Note 4, *c, d*, for arguments against and for the use of meat in the diet of young children.

All foods difficult of digestion, such as all rich or heavy foods (see Note 6), should be forbidden children.

2. The foregoing synopsis applies to invalid adults as well as to children.

3. Breadstuffs, if hot, are very likely to be soggy. Hot soggy foods (breadstuffs, etc.) are difficult to digest, especially if they are poorly masticated. Why?

Children should not be given very fresh bread, rolls, etc., even if these foods are cold.

4. Note reasons why candies and other sweets in excess, including excess sugar served on cereals, are harmful to children (and adults):

- a.* Sugar satisfies the appetite and so destroys the desire for other foods, especially when it is eaten between meals.
- b.* Sugar as such is likely to irritate the lining of the stomach unless it is taken in a diluted form.
- c.* Sugar may ferment during the process of digestion, and thus irritate the digestive organs.
- d.* Candy and some other sweets are lacking in the mineral salts so essential in children's diet. Pure sugar is lacking in mineral salts, hence it is wiser for children to secure most of their sugar from *milk and sweet fruits* than from candy, because the milk and fruits contain mineral salts.
- e.* Sugar in excess often results in making too high the daily total percentage of carbohydrates in the diet.
- f.* Sugar in excess may lead to diabetic tendencies.

For further arguments against the use of excess sugar on cereals, see page 55, Note 6.

5. Stimulating beverages are forbidden children, but since most of them are not *foods*, they are not listed in this synopsis; see page 94, Note 3

6. By rich foods are meant those foods which contain much of one or more of the following:

Fat

Fruit, dried or preserved

Seasoning and flavoring

Sugar or sirup

Food combinations for children (and invalids) should always be simple, because the more complex the mixture of fat, carbohydrate, and protein, the longer and more difficult is the process of digestion. Rich pies, cakes, and puddings are so put together as to make them very difficult of digestion. All complex made dishes, such as stuffed peppers, should be avoided in children's diet.

PART II

DIET FOR THE EXPECTANT MOTHER

"If then she [the expectant mother] lives in such a manner as to establish and conserve her own health, taking plenty of sleep and exercise, eating sensibly of simple food, and in every way striving to take the best possible care of her own body, so that the digestive, assimilative, and excretory functions are carried on in the highest degree of efficiency, she can be quite sure that the child will be able thereby to build up for himself a sound and normal body and brain."—WEST, *Prenatal Care*, page 20.

ESSENTIALS IN THE DIET OF THE EXPECTANT MOTHER

The expectant mother, probably more than the average person, should lay stress upon each of the so-called essentials in the normal adult's diet. These are as follows:

Building materials, such as:

Nitrogen (found in protein foods chiefly)

Iron

Calcium, or lime

Phosphorus

Energy foods (chiefly fats and carbohydrates)

Balance of acid and basic elements

Bulk (chiefly cellulose and water)

Vitamines or food hormones

Appetizers, or so-called food relishes

Notes:

1. Quantity and general character of the food:

"It should not be assumed that the diet of a pregnant woman should be largely increased, or that her needs require a diet unusual in kind. An ordinary mixed diet that is adapted to sustain a woman doing moderate work is certainly sufficient for the gravid mother. The diet should be judiciously selected, however. The extensive use of such foods as pastry, cakes, sweets, and all similar materials, largely carbohydrate with a marked *deficiency in protein and the ash elements*, should be avoided.

"A simple diet made of meats, milk, and eggs in moderate proportions, and grain, vegetable, and fruit preparations which carry as nearly as possible the unmodified composition of the natural products, will be found sufficient for all the needs of the prospective mother.

"If a woman reasonably satisfies a normal appetite from food selected as indicated above, all real requirements will be met. The caution is that an appetite abnormal in its desires should be controlled and that both excessive eating and overindulgence in foods markedly deficient in the *ash elements and protein be kept in check*."¹

"The food of a woman during pregnancy need not differ materially from that to which she has been accustomed, provided that her diet previously has been chosen with due regard to its suitability. Any food or drink which causes distress, or even discomfort because of indigestion, should be avoided at all times, but with this exception a pregnant woman may safely follow the dictates of her appetite as to the choice of her food.

"There are, however, certain general principles that she should take into consideration. One of these is that the excretory organs—the bowels, the kidneys, and the skin—should be kept in the best possible condition, because during pregnancy the mother must get rid of not only her own waste products but also those of the unborn child. It will be found, therefore, that a light, laxative diet, which is at the same time satisfying and nutritious, will tend to keep her in health. An ideal diet includes a relatively large proportion of

¹Jordan, *Principles of Nutrition*, pages 265-266.

liquids, a small proportion of meats, and a correspondingly generous proportion of fresh fruits and vegetables. Most physicians prefer that meat should not be eaten oftener than once a day, but allow a wide latitude in the choice of other foods.

"It is well to understand that the accumulation of waste products in the system is the cause of various minor ailments of pregnancy, as well as of some of the more serious complications. Since liquids help the bowels, kidneys, and skin to throw off these waste products, and therefore do away with some of the sources of danger at this time, it is important that liquids should form a large part of the diet of every pregnant woman. The proper amount to be taken in 24 hours varies in different cases, but at least 2 quarts of liquid are needed, and sometimes 3 quarts. Much of this should be in the form of water. Specifically, pregnant women will usually need to drink from four to eight glasses a day. Other liquid foods are cocoa and chocolate, soups and broths, buttermilk and sweet milk. The last named is especially valuable in the diet of pregnancy, since milk not only contains all the elements of a perfect food, but is valuable for stimulating the kidneys to healthful action. Also if the habit of drinking milk is established during pregnancy, it will be an excellent preparation for maternal nursing. If milk has a tendency to constipate, as is sometimes the case, the persistent use of . . . laxative diet . . . will probably do away with this objection. Every effort should be made to cultivate the taste for milk, for there is no other one food so indispensable to the mother of a nursing baby.

"If one is accustomed to the daily use of tea and coffee it is unnecessary to stop their use altogether, but an effort should be made to reduce the amount taken. This rule applies with even greater force to all alcoholic drinks, since there is evidence to show that alcohol may enter the fetal system unchanged by its passage through the maternal blood, and thus injure the child."¹

2. Reason why the diet of the mother should be well regulated:

"The baby is born with bones and muscles, blood vessels and nerves; with a supply of iron stored in its body sufficient to make good for the first year the deficiency of iron in milk. All the materials used for this growth and for storing are drawn from the blood stream of the mother."²

¹Mrs. Max West, *Prenatal Care*, pages 8-9, Care of Children Series No. 1, Children's Bureau, U.S. Department of Labor.

²Flora Rose, *The Care and Feeding of Children*, Part I (Cornell Reading-Courses).

PART III

DIET FOR THE YOUNGER INFANT (BIRTH TO ONE YEAR OF AGE)

Milk has no substitute in the diet of the child.—DOROTHY R. MENDENHALL, *Milk, the Indispensable Food for Children*, page 6, Care of Children Series No. 4, Children's Bureau, U.S. Department of Labor.

NATURAL FEEDING OF YOUNG INFANTS

If circumstances permit, it is the moral duty of every mother to nurse her baby; such care is due the child. "The majority of mothers can nurse their babies, at least in part, if they have suitable care and advice."¹

Note reasons why the majority of mothers should nurse their babies:

- a. "The death rate among artificially fed babies is seven to ten times as great as among those fed from the breast."²
- b. "Breast-fed babies have a greater possibility of developing into healthy childhood than artificially fed ones."³
- c. "One-third of the babies die before the end of the third year, and 85 per cent of these are bottle-fed."⁴

Reasons for substituting cows' milk for mothers' milk are as follows:

Milk poor in quality

Milk insufficient in quantity

Milk which does not agree with the child

Weak, frail, or sickly mother

Mother with a contagious disease (such as scarlet fever or diphtheria)

Mother with a serious disease of heart or kidneys

Poor family history on mother's side (tuberculosis, epilepsy, and insanity make nursing prohibitive)

Note:

Diet for the nursing mother:

"A nursing mother should have a light, abundant, and appetizing diet, and such a one as causes her no indigestion. Disturbances in the digestive tract of the mother are quickly reflected in the baby's condition, and therefore the mother should refrain from eating or drinking those things which she knows from experience she cannot digest. As a rule, indigestion in the mother, which shows itself in constipation, eructations of gas, headache, diarrhea, and the like, is caused by such foods as heavy puddings or underdone pastry; doughnuts; fried food soaked in fat; made dishes, such as croquettes and fritters; pickles, mincemeat, baked beans, pork and cabbage, and other heavy or poorly cooked foods; but people differ greatly in their power of digestion, and what will suit one person may upset the next. Overeating may be a cause of indigestion.

"A mixed diet of such digestible and nutritious foods as are readily available is desirable for the nursing mother. All foods are milk-making foods. The foods selected will differ

¹Mrs. Max West, *Infant Care*, Care of Children Series No. 2, Children's Bureau, U.S. Department of Labor.

²Flora Rose, *The Care and Feeding of Children* (Cornell Reading-Courses).

³*Ibid.*

⁴*Ibid.*

widely according to circumstances, but will usually include vegetables, ripe fruits, meat, poultry and fish, with oysters and the like, eggs, milk, cheese, farinaceous foods of all kinds, cereals, flour, meals, etc., breads, especially graham, whole wheat, corn meal, and bran, and simple desserts. Occasionally acid fruits, vegetables, and spices eaten by the mother may cause some disturbance in the baby, and in such cases they should be avoided.

"Constipation is to be most carefully avoided, by eating bran bread and other laxative foods. Drugs should be taken as little as possible, and only on the doctor's advice. Tea and coffee may be taken in moderation, not more than one cup of each a day. Alcoholic drinks of all sorts are better avoided. One quart of milk should be taken each day. Six to eight glasses of good drinking water a day are required, one or two of which should be taken on rising to encourage the action of the bowels."¹

¹Mrs. Max West, *Infant Care*, pages 33-34, Care of Children Series No. 2, Children's Bureau, U.S. Department of Labor.

ARTIFICIAL FEEDING OF YOUNG INFANTS

All the material on this subject (pages 27 to 30) is taken from Mrs. Max West, *Infant Care*, Care of Children Series No. 2, Children's Bureau, U.S. Department of Labor, and from the report of a committee of the American Medical Association (as quoted in *Infant Care*). For further suggestions see L. Emmett Holt, *The Care and Feeding of Children*.

GENERAL NOTES

"Leading authorities differ so widely on various points connected with this subject that no directions can be given which will meet with general agreement. A few of the fundamental points are given here, but whenever possible the mother should confer with a good doctor regarding an artificially fed infant.

"The only proper artificial food is cows' milk, suitably modified to suit the child's age and development.

"The term 'artificial feeding' refers, in common acceptance, to the method of feeding which must be employed when a baby is, for any reason, denied breast milk.

"*Fresh cows' milk.* Wide experience has shown that fresh cows' milk is the best substitute for breast milk. This milk should be the purest and cleanest possible; it should be the product of a tuberculin-tested herd, one that is healthy, well fed, properly housed and cared for, and milked by clean milkers, into sterilized utensils. The milk should be bottled and cooled at the dairy and delivered to the consumer in sealed bottles. The milk commonly sold from open cans, known as 'loose' or 'dipped' milk, should never be given to a baby.

"*Certified milk.* In certain places it is possible to obtain what is known as 'certified' milk, which is fresh, clean, pure, normal milk of uniform composition and highest quality obtained from healthy cows and produced and handled under the supervision of a medical milk commission, with special sanitary precautions:

"*Heating or cooking milk.* When certified milk cannot be had, or some other milk known to be clean, it is safer to heat that which is used.

"*Breed of cows.* Authorities recommend the herd milk of Holstein or ordinary grade cows for infant feeding, as such milk has a more nearly proper percentage of fat than others. If one is obliged to use Guernsey cows, some part of the fat should be removed before making up the feedings."

CHOICE OF UTENSILS

"Enameled ware or aluminum utensils are the safest kind to use, since they are most readily kept clean. They should be used exclusively for this purpose. The following articles will be found convenient:

As many nursing bottles as there are
feedings in one day

A nipple for each bottle

A new clean cork stopper for each bottle

A bottle brush

A graduated measuring glass

A 2-quart pitcher

A pail or kettle for pasteurizing the milk
and sterilizing the utensils

A fork

A tablespoon

A funnel

A long-handled spoon for stirring food

"Bottles. The best nursing bottle is the one which affords the least harbor for germs. An 8-ounce cylindrical bottle having the scale in ounces blown in the side is most convenient, as it fits readily into the ice box and the pasteurizer. Such a bottle should have a short neck which slopes gradually into the shoulder. It is difficult, if not impossible, to clean a long-necked bottle having a sharp angle below. It should be possible to reach every part of the inside with the bottle brush. New bottles should be annealed by placing them on the stove in a dishpan of cold water and leaving them to boil for 20 minutes. Allow them to stay in the water until it is cold. Bottles thus treated will not readily break when filled with boiling water or when the food is being cooked in them.

"Nipples. A conical nipple is best, since it can be readily turned inside out to be cleaned. Nipples attached to long rubber tubes should never be used, as it is impossible to clean them. They are so dangerous to infant health and life that the sale of them ought to be prohibited by law. The hole in the nipple should be just large enough so that when the filled bottle is held upside down the milk drops rapidly. If the hole is large enough so that the milk runs in a stream, the baby will take his food too fast."

CARE OF UTENSILS

"Everything that is to be used in the preparation of the baby's food, including the hands and clothing of the mother or nurse, must be absolutely clean. To clean the utensils they should be boiled in the large kettle for 15 minutes just before using.

"Care of bottles. Each bottle should be emptied as soon as the baby has finished nursing, then rinsed with cold water and left standing filled with water until the bottles for one day's feedings have all been used. At a convenient time, scrub all the bottles with hot soapsuds, using the bottle brush over every part of the inside. Then rinse them thoroughly through several waters and put them in a kettle of water over the fire. When the water has boiled for 15 minutes the bottles will be sterilized.

"Care of nipples. Nipples need special care. If allowed to soak in water when not in use the rubber quickly becomes spongy and disintegrates, the hole grows larger and larger, and the nipple is soon unfit for use.

"Immediately after the feeding remove the nipple and rinse with cold or warm (not hot) water. Rub the outside with a little common salt to remove the milk, turn the nipple inside out, rinse and rub with salt; rinse again and boil for five minutes. The nipple will dry at once when removed from the boiling water. Place in a dry glass jar which has been boiled and screw the cover on tight. Keep from the light. The nipples should be rinsed in boiling water just before using."

INGREDIENTS FOR MODIFIED MILK

The following directions for feeding the baby have been prepared by the committee of the American Medical Association referred to in the footnote on page 11:

"Beginning on the third day, the average baby should be given 3 ounces of milk daily, diluted with 7 ounces of water. To this should be added 1 tablespoonful of limewater and 2 level teaspoonfuls of sugar. This should be given in seven feedings.

"At 1 week the average child requires 5 ounces of milk daily, which should be diluted with 10 ounces of water. To this should be added 1½ even tablespoonfuls of sugar and 1 ounce of limewater. This should be given in seven feedings. The milk should be increased by one-half ounce about every four days. The water should be increased by one-half ounce every eight days.

"At 3 months the average child requires 16 ounces of milk daily, which should be diluted with 16 ounces of water. To this should be added 3 tablespoonfuls of sugar and 2 ounces of limewater. This should be given in six feedings. The milk should be increased by one-half ounce every six days. The water should be reduced by one-half ounce about every two weeks.

"At 6 months the average child requires 24 ounces of milk daily, which should be diluted with 12 ounces of water. To this should be added 2 ounces of limewater and 3 even tablespoonfuls of sugar. This should be given in five feedings. The amount of milk should be increased by one-half ounce every week. The milk should be increased only if the child is hungry and digesting his food well. It should not be increased unless he is hungry, nor if he is suffering from indigestion even though he seems hungry.

"At 9 months the average child requires 30 ounces of milk daily, which should be diluted with 10 ounces of water. To this should be added 2 even tablespoonfuls of sugar and 2 ounces of limewater. This should be given in five feedings. The sugar added may be milk sugar or if this cannot be obtained cane (granulated) sugar or maltose (malt sugar). At first plain water should be used to dilute the milk.

"At 3 months, sometimes earlier, a weak barley water may be used in the place of plain water; it is made of one-half level tablespoonful of barley flour to 16 ounces of water and cooked for 20 minutes.

"At 6 months the barley flour may be increased to $1\frac{1}{2}$ even tablespoonfuls cooked in the 12 ounces of water.

"At 9 months the barley flour may be increased to 3 level tablespoonfuls cooked in the 8 ounces of water."

Notes:

1. "Sugar is added to the food, not to sweeten it, but to furnish a necessary foodstuff. Physicians differ as to the best sugar for use in infant feeding. Malt sugar gives very good results, and several preparations which contain dextrin as well as maltose are on the market, but are expensive. Milk sugar is also expensive, and some physicians believe that it has a greater tendency to upset the baby. Cane sugar is the cheapest form of sugar, and many babies seem to digest it very well."¹

2. Whey and barley or oatmeal gruel² are sometimes added in modifying milk for babies. (Water, limewater, sugar, and barley water are the additions used in the foregoing directions.)—AUTHOR'S NOTE.

Modified Milk³

Method:

1. Remove the milk bottle from the refrigerator, rinse it in boiled water, and wipe the top of bottle with a clean towel.

2. Remove the paper cap with a fork which has just been boiled.

3. Pour out enough milk for the day's feedings, measuring the quantity in the glass graduate, and empty it into the pitcher.

4. Measure the required quantity of water (using cold boiled water) in the same way and add it to the milk.

¹ Mrs. Max West, *Infant Care*, page 42.

² See *Diet for Invalids*, "Foods Yielding an Acid or Alkaline Ash in the Body," Notes 3 and 4.

³ This method for modified milk and the two notes are adapted from Mrs. Max West, *Infant Care*, pages 46-47.

5. Measure sugar and limewater; add these to milk and water and stir well.
6. Take as many bottles as there are to be feedings in 24 hr., and fill them exactly to the proper depth according to the scale blown in the bottle. If the materials have been carefully measured, the bottles will be filled to equal depth.
7. Close with new, clean bottle corks¹ in preference to wads of cotton.
8. Pasteurize or sterilize the feedings thus prepared in accordance with the directions given in Notes 1 and 2.

Notes:

1. *Pasteurizing:*

- a. Heat the milk to 145° F. and hold it at this temperature for 30 min.
- b. Cool milk rapidly to 50° F.

The use of one of the excellent pasteurizers and sterilizers in the market greatly simplifies this part of the work, but satisfactory results can be attained by the use of an ordinary pail or kettle. A convenient method for home pasteurizing is as follows:

- a. Place 4 qt. water on the stove in a kettle.
- b. When the water is boiling hard, remove the kettle from the stove to a table and allow it to stand uncovered for 10 min.
- c. Place the filled and loosely corked bottles in the water, cover the kettle, and allow them to stand covered for ½ hr.
- d. Remove the bottles, and cool them rapidly under running water. Keep bottles in the refrigerator until needed. *Caution:* Do not uncork a bottle from the time it is first closed until the baby is to be fed.

2. *Boiling, or sterilizing:*

Method a:

- (1) Fill the bottles and stand them in a kettle of water over the fire.
- (2) Heat the milk 45 min. after the water begins to boil.

Method b:

- (1) Pour milk into a clean saucepan, and boil it 3 min.
- (2) Pour milk into sterilized bottles.
- (3) Cool bottles rapidly in running water.

PROPRIETARY, OR PATENT, INFANT FOODS

"These foods may be classified into those made upon a *milk basis* and those made upon a *cereal basis*. Or they may be grouped so as to show which are intended to be *added to fresh cows' milk after they have been mixed with water*, and which are intended to be *mixed only with water*. They might also be divided according to their composition, showing which are *high in sugar or in insoluble starch or deficient in fats*. . . . The general consensus of opinion among authorities seems to be that one or another of these foods may be temporarily used when fresh cows' milk is not available for any reason, as in traveling, or in the Tropics, but that their continued and exclusive use is to be condemned. All are expensive, and many of them do not give the baby the required food elements nor the proper proportions of these elements, while the use of some of them is known to be followed by various forms of illness."²

¹Sterilized rubber caps may be snapped over corks, thus reducing the possibility of the entrance of dirt or germs into milk. Corks are likely not to fit perfectly.—AUTHOR'S NOTE.

²Mrs. Max West, *Infant Care*, page 48.

PART IV
DIET FOR THE OLDER INFANT
(ONE TO TWO YEARS OF AGE)

SUGGESTIONS FOR A LESSON

LIQUIDS AND SEMI-SOLID FOODS

1. Preparation by each pupil (by assignment) of two or more of the following:

- Fruit juice and pulp
- Starchy gruel and jelly
- Coddled egg
- Albumin water
- Meat broth
- Beef juice
- Sterile drinking water

SUGGESTIONS FOR A DAY'S MEALS

(Diet for the infant one to two years of age)

- 6:00 A.M. Warm milk
- 8:00 A.M. 1-3 tb. strained juice or strained pulp of mild fruits, such as:
Sweet-orange juice (especially desirable; usually first fruit given)
Prune juice or pulp
Pineapple or fresh peach juice
Cooked apple or pear juice or pulp (from baked or stewed fruit)
Sweet-tomato juice¹
- 10:00 A.M. Cereal, 2-3 tb.
Warm milk to drink
Dry breadstuff, 1-2 slices (such as stale, dry bread, dry toast, or zwieback, a variety of toast)
- 2:00 P.M. 1 yolk of egg
Dry breadstuff, 1-2 slices
Mild juicy vegetable (1-3 t. strained juice and strained pulp; see Note 2, *vegetables*), such as:
Beets or carrots, very young
Peas, young green
Spinach
Warm milk to drink
- 5:30 P.M. Cereal, 2-3 tb.
Stale bread, 1-2 slices
Warm milk to drink

Notes:

1. This diet deals with infant feeding during the second year, that is, with a child just beyond the nursing period. For a study of the caloric value and cost of foods for a child one and one-half to two years old, see Mary Swartz Rose, *Feeding the Family*, pages 126-127.

2. Note the following points in regard to the feeding of a child during its second year:

Cereal (well-cooked): Serve as follows:

- a. Strained gruels and jellies (see recipes, pages 36-37) for children during the first two or three months of the second year
- b. Unstrained cereals for the older children:
At first, the fine cereals (such as farina)
Later, coarser cereals (such as rolled oats)

Serve with cereal a little salt and 1-4 tb. top milk or thin cream, but no sugar.

¹ Tomato juice, like orange juice, is a valuable source of antiscorbutic vitamine. Tomatoes (raw, canned, or dried), since available and cheap, are being substituted for oranges to quite an extent in children's feeding. Hess and Unger (*American Journal of Diseases of Children*, XVII [April, 1919], 221) found tomatoes (canned) strained as good for infants as orange juice.

Breadstuffs (dry): The exact time for the introduction of these depends upon the state of development of the teeth.

Egg yolk: Serve not more than one yolk daily; mix it with milk or heat it slightly. Occasionally, a whole egg may be served. Egg yolk is a valuable source of iron, calcium, and phosphorus.

Milk: $\frac{3}{4}$ -1 qt., served each day as follows, is the basis of the diet:

- a. Warm beverage: $\frac{3}{4}$ -1 c. milk served at each of the five feedings listed except the one at 8:00 A.M.
 $\frac{3}{4}$ -1 c. milk sometimes served at 10:00 P.M.
- b. Some milk served on the cereal

Orange juice (fresh uncooked): This is given to infants for four reasons:

- a. To prevent constipation
- b. To furnish vitamins (and so to prevent infantile scurvy)
- c. To maintain balance of alkali and acid in the body (and so to prevent acidosis)
- d. To furnish calcium for bones and teeth (a very minor reason)

In general, the first three reasons apply also to other fruit juices; for example, prune juice is laxative. Certain fruit juices, such as prune, are rich in iron.

It is asserted that an infusion of 1 oz. white inner skin of orange to 2 oz. water is just as rich in vitamins and as good for children as orange juice; and it is certain that it is much cheaper. Hess says: "Orange peels are washed, grated, and added to twice their volume of boiling water. This is allowed to stand over night, then strained, and is ready for use. Sugar is added when necessary to make it palatable."¹

Vegetables (strained): These are chiefly given after a child is a year and a half old. Spinach, because of its iron content, is the best vegetable to give first. Serve the vegetables with salt, or salt and a little cream. Sometimes a vegetable may be made into a milk soup in which no fat and only a little flour are used.

Water (sterile): This is essential in infant feeding. Water, slightly warmed, should be offered freely between meals.

"The baby needs plenty of cool, unsweetened water to drink. It is safe to boil all the drinking water for a baby, which should be given to a young baby lukewarm, never ice-cold. Never put sugar or anything else in it. Offer it to the baby between feedings; in summer especially he needs to drink it frequently. Fretful babies, especially those cutting teeth, are often quieted by a cool drink."²

The use of water in infant feeding "is a feature that is too frequently underestimated. Many a child's suffering has been relieved by a few teaspoonfuls of boiled water that has been cooled (not iced), and given at frequent intervals during a hot day. This should be the rule, not the exception, from birth."³

3. The dietaries given on page 35 are taken from *The Care and Feeding of Children* (Cornell Reading-Courses), by Flora Rose.

¹ Hess, *Journal of the American Medical Association*, Vol. LXXI (1918).

² Mrs. Max West, *Infant Care*, page 49.

³ Louise E. Hogan, *How to Feed Children*, page 122.

6:00-7:00 A.M. Warm milk mixed with a little thick cereal gruel or cereal jelly

or

9:00-10:00 A.M. Glass warm milk

1:00- 2:00 P.M. A lightly cooked egg mixed with stale crumbs, glass of warm milk

or

Midway between meals .

One or two tablespoonfuls orange juice or prune juice (This meal may be given at nine o'clock in the morning instead of at this time.)

5:00-6:00 P.M. Glass warm milk with cereal jelly

6:00-7:00 A.M. Warm milk with lightly buttered bread

or

Cereal with thin cream, glass of warm milk

or

Lightly cooked egg, lightly buttered bread, glass of warm milk

10:00 A.M. Glass of milk with slice of bread

1:00-2:00 P.M. Mashed potato with dish gravy, bread and milk, very small serving
baked apple or prune pulp

or

Lightly cooked egg, bread and milk, small serving baked apple or prune

or

Mashed spinach, carrots, or similar vegetable, bread and milk, small serving very simple junket or rice pudding or similar simple dessert

Midway between meals

Tablespoonful orange juice, a scraped apple

5:00-6:00 P.M. Bread and milk, or milk toast

4. The following list (taken from "The Care of Young Children," *Journal of Home Economics*, June, 1917) shows the day's meals for a child in his second year:

7:00 A.M. Milk (quart should be used during the twenty-four hours)

Zwieback, toast, or dried bread

9:00 A.M. Orange juice

10:00 A.M. Cereal (well cooked); cup of milk

2:00 P.M. Broth; meat (about 1 tablespoonful scraped or minced), or a soft boiled or coddled egg; vegetable (such as spinach or tender green beans, strained after cooking); baked apple, or prune pulp

6:00 P.M. Cereal; milk; toast or bread

10:00 P.M. Milk¹ (may be omitted)

¹Beverages taken late at night by young children usually cause restlessness.—AUTHOR'S NOTE.

LIQUIDS AND SEMI-SOLID FOODS

FRUIT JUICE AND PULP

The strained juice and strained pulp of fruits cooked as follows may be used in infant feeding:

Stewed Prunes

Method:

1. Wash prunes in several waters, and soak them over night.
2. Simmer prunes in this same water until they are plump and tender.

Note:

A very little sugar may be added, but in infant feeding it is better not to add sugar, since the fruit itself contains sufficient sugar.

Stewed Apples

Method:

1. Boil apples until they are tender, then press them through a sieve.
2. Add a very little sugar, if any.

Baked Apple

Method:

1. Pare and core an apple.
2. Add 1-4 tb. cold water, depending on the size of the apple.
3. Sprinkle apple with a very little sugar, cover tight, and bake in a moderate oven until it is tender.

STARCHY GRUELS AND JELLIES

The starchy gruels and jellies include "farinaceous substances, such as barley, oatmeal, arrowroot, farina, rice, wheat and bread, preferably in the form of water gruels and jellies."¹

The three grades of starchy food, named in sequence according to thickness, are:

Water (such as barley or rice water)

Gruel

Jelly

Rolled-Oats Gruel or Jelly

Ingredients:

1 tb.	1/2 c. rolled oats
1 c.	2 c. boiling water
dash	1/2 t. salt

¹Cotton, *Care of Children*, page 109, Library of Home Economics.

Method:

1. Slowly add rolled oats to boiling salted water, cook mixture 3 hr. in a double boiler, then strain it through a wire sieve.
2. Thin the strained cereal with boiling water to desired consistency.

Barley Water**Ingredients:**

1 t.	2 t. barley flour
1½ t.	3 t. cold water
1 c.	2 c. boiling water
dash	Pinch of salt

Method:

1. Mix flour with cold water to make a smooth paste.
2. Add it to the boiling water, stirring to prevent lumps.
3. Add salt and cook mixture at least 1 hr., adding enough water at the last to make a total of 2 c. liquid.
4. Strain through cheesecloth or a gauze strainer.

Barley Gruel and Jelly**Ingredients:**

2 t.	1⅓ tb.-5⅓ t. barley flour
3 t.	Cold water for a paste
1 c.	2 c. boiling water
dash	Pinch of salt

Method:

Follow the method for barley water.

Notes:

1. This recipe is the same as that for barley water except for extra flour. "Barley water, gruel, and jelly differ only in thickness."¹

2. "Pearl barley may be used if necessary. The grains must soak overnight and be cooked for three to four hours. Use a heaping teaspoonful of the grains for a pint of water."²

3. "Rice jelly is made in the same way as barley jelly. The directions for cooking the various wheat preparations appear on the boxes, but all such preparations should be cooked at least three times as long as is there indicated, and should be strained, and thinned to the proper strength with boiling water."³

4. "A fireless cooker is a great help in the preparation of cereals. If porridges are cooked for the family breakfast, a large spoonful of the cooked porridge may be added to a pint of boiling water, heated, stirred, and strained to make a thin gruel."⁴

¹Mrs. Max West, *Infant Care*, Care of Children Series No. 2, Children's Bureau, U.S. Department of Labor.

²*Ibid.*

³*Ibid.*

⁴*Ibid.*

MISCELLANEOUS RECIPES

Eggs Soft-cooked in the Shell*(Coddled eggs)***Method:**

1. Have a saucepan of water boiling hard, drop in eggs gently, and remove pan from the fire at once; allow 1 pt. water to each egg, and have the saucepan of such a shape that the water covers the eggs.

2. Cover the pan and allow the eggs to cook 6–10 min., keeping the pan in a warm place.

3. Season the eggs with a little salt.

Notes:

1. The whites of eggs should be soft and jelly-like. Cooked in this way they are quite readily digestible.

2. Some children cannot digest the yolks of eggs, and it is often wise on this account to begin by feeding the whites only.

Albumin Water**Method:**

1. Place one raw white of egg in a saucer and cut (do not beat) with scissors or a knife and fork until much of the tenacious quality of the white is lost.

2. Add 1 c. cold sterile water, strain the beverage through cheesecloth, and add a little salt, if desired.

3. Keep the beverage on ice until it is time to serve it.

Meat Broth¹**Method:**

1. Cut 1 lb. of any of the following raw meats into small pieces:

Beef, lean, such as:

Round

Rump

Chuck steak

Neck

Mutton (all skin and fat removed)

Chicken (fowl, not a broiler)

2. Add 2 c. cold water, and allow it to come to boiling point.

3. Lower temperature and simmer meat 3–4 hr., or until it is tender; cook in a fireless cooker, if preferred.

4. Remove meat and add enough water to make up the original quantity (2 c.).

5. Strain broth through a wire sieve and set it aside to cool.

¹Meat broth and beef juice should not be given unless a doctor orders them. (Not all authorities advise giving them to infants and other young children; see pages 14–15, Note 4).

6. When broth is cold, remove fat in a solid piece, leaving a clear liquid or jelly; it is very important that every particle of fat be removed (see *Food Economy*, page 136, step 7).

7. Heat a small portion of jelly, season with salt only, and serve.

Notes:

1. "Broth has little or no nutritive value in itself, but if added to milk, or thickened with arrowroot, cornstarch, or gelatin, or eaten with dry bread crumbs it becomes a real food."¹

2. The use of beef extract is not to be advised in infant feeding. "The true meat extract, if pure, contains little else besides the flavoring matters of the meat . . . , together with such mineral salts as may be dissolved out. . . . It is, therefore, not a food at all, but a stimulant."²

Beef Juice³

Two methods are given for preparing beef juice for infant (or adult) feeding; the following suggestions apply to both methods:

Use fresh raw meat.

Use such cuts as the following:

Round steak (generally used)

Sirloin steak

Chuck steak

Rump

Neck

Wipe meat with a damp cloth.

Method I:

1. Remove all fat from meat.
2. Broil the meat slightly; that is, cook 1-2 min., or just long enough to heat meat throughout, so that the juice will flow readily when meat is cut.
3. Cut meat into small pieces.
4. Squeeze juice into a hot cup, using a meat-press, lemon-squeezer, or potato-ricer.
5. Salt juice, and serve at once.

Method II (Cold process):

1. Grind very fine in a meat-grinder 1 lb. beef from which all the fat has been cut.
2. Place meat in a glass jar, add $\frac{1}{2}$ -1 c. cold sterile water, and shake well.
3. Cover the jar lightly and place it on ice over night, shaking occasionally, if possible.
4. In the morning strain the juice through sterile cheesecloth.
5. Add salt to the juice, warm slightly in a double boiler, and serve.

¹Mrs. Max West, *Infant Care*, page 79.

²"Meats: Composition and Cooking," *Farmers' Bulletin 34*, page 20, U.S. Department of Agriculture.

³See footnote, page 38.

Sterile Drinking Water**Method:**

1. Put water into a saucepan, cover, and boil rapidly 20–30 min.
2. Cool water quickly.
3. Pour water into sterilized bottles, cork them with sterilized corks or cotton, and place them near or on the ice. Do not add ice. (Why?)

Notes:

1. Warm the water slightly before giving it to the baby.
2. In any community where the water supply comes from a surface well, or from any other source that is at all questionable, all drinking water should be boiled—water for adults and children as well as for infants.



Courtesy of Marna Brockelti, formerly Superintendent of the Mary Crane Nursery

A LUNCHEON AT THE MARY CRANE NURSERY

Cream-of-spinach soup at this luncheon illustrates McCollum's principle of the necessity of milk and leafy vegetables—protecting foods—in the diet of children.

PART V

DIET FOR THE CHILD TWO TO FOUR YEARS OF AGE

SUGGESTION FOR A LESSON

STRAINED VEGETABLES

2. Preparation of strained pulp from celery, spinach, etc.

SUGGESTIONS FOR A DAY'S MEALS

(Diet for the child two to four years of age)

Breakfast (7:30 A.M.):

- Cereal (see Note 3)
- Warm milk to drink (see Note 2)
- Stale bread (see Note 4)
- 1-4 tb. fruit juice or strained pulp (selected from list on page 33; baked or steamed bananas are also allowable)

Lunch (11:00 A.M.):

- Milk (1 c.)
- Bread (stale) with butter (see Note 4)

Dinner (1:00 P.M.):

- Starchy vegetable or a substitute (see Note 6)
- Mild, juicy vegetable, mashed (see Note 7)
- Milk to drink
- Bread (stale) and butter
- Dessert (see Note 8)

Supper (5:30 P.M.):

- A milk-and-starchy-food combination (see Note 5)
- Milk to drink
- Bread (stale) and butter

Notes:

1. Pupil to note the evolution of these meals from those suggested on page 33. (The older a child, the more complex the meals.)
2. A quart of milk, served as follows, should be the basis of every day's menus:
 - Part (slightly warmed) served as a beverage
 - Remainder served as a component part of one or more of the following:
 - Milk-and-starchy-food combinations (see Note 5)
 - Cream-of-vegetable soups
 - Desserts (see Note 8)
3. Cereals (unstrained) for use in the menus include:
 - Finely ground cereal (cream of wheat or farina)
 - Flakes, ready-to-eat (such as corn or wheat)
 - Grits (hominy or wheat)
 - Meal (corn or oat)
 - Rice (brown rice preferable to polished rice)
 - Rolled cereal (barley, oats, or wheat)

The coarser cereals (oatmeal, cracked wheat, ready-to-eat cereals, etc.) should not be given until after a child has learned to chew its food properly. The ready-to-eat cereals are often especially desirable for supper, particularly in the summer.

Serve a cereal with salt, top milk or thin cream, and only a sprinkle of sugar, if any (see page 55, Note 6, as to use of sugar on cereal for children of various ages).

4. The following dry, unsweetened breadstuffs are interchangeable in the diet of the child 3 or 4 years of age:

- Bread, dry (white, graham, etc.)
- Bread, stale (at least two days old)
- Bread sticks, crusty and stale
- Bread, pulled
- Crackers, hard and crisp (such as whole-wheat, graham, oatmeal, soda, gluten, Educator, etc.)
- Rolls, crusty (baked a second time when 24 hr. old)
- Toast, very dry (slices, sticks, or croutons)
- Zwieback

In feeding children 2 to 4 years old (as well as all older children), some form of breadstuff is usually given at each meal. Hard-baked crisp breads are advisable in that they require mastication. The breadstuffs should be thoroughly baked, and homemade for the most part. Partially dextrinized breadstuffs, such as crusts and zwieback, are often especially desirable because they are partly predigested.

"The ordinary breakfast toast is not suitable for a baby. For him the bread should be at least one day old, and be cut in very thin slices. Slices should be placed on edge in a toast rack in the oven to dry, or kept separated by some other means. Leave the oven door partly open. The slices should not brown, but after they are dry they may be lightly toasted and should be tender and of a uniform dryness throughout.

"Dried bread: This is similar to the toast. Pull a loaf of fresh bread in pieces and dry in the oven in the same way, then toast very lightly, as needed."¹

Whole-grain breads, such as graham, are usually preferable for children in that they supply mineral elements for growth.

As a rule, "animal" and other sweet crackers should be avoided, since they pervert the taste.

5. The following milk-and-starchy-food combinations are often interchangeable in the menus, lunch and supper menus especially (avoid pasty masses so far as possible):

- Milk and a dry breadstuff (with or without butter)
- Milk toast
- Milk and cereal (such as rice)
- Milk to drink, and a baked potato (mashed)
- Milk to drink, and spaghetti or macaroni (boiled in water until tender and then simmered in milk, cream, or beef broth)
- Cream soup and a dry breadstuff

The old-fashioned bowl of bread and milk cannot be improved upon for a child's supper. Milk-and-cereal, also, is often especially desirable.

6. Starchy vegetables and their substitutes² for use in this diet are as follows:

- Potato, baked (especially desirable)
- Potato, boiled and thoroughly mashed
- Spaghetti or macaroni, boiled
- Rice, boiled

¹Mrs. Max West, *Infant Care*, pages 79-80.

²*Food Economy*, page 49, Note 5, gives list of substitutes for white potatoes, for use in adults' diet.

Serve any of the foregoing with salt only, or with one of the following:

Milk or thin cream

Beef juice
Platter gravy } (See pages 14-15, Note 4)

7. Mild juicy vegetables for use in this diet include the following:

Asparagus tips

Beans, string

Beets, very young

Carrots, young

Cauliflower tips

Celery

Onions

Peas, young green (strained)

Spinach (especially valuable because of its iron content)

Squash

Boil (or steam) the vegetables, mash them or press them through a sieve, and add salt, or salt and a little cream, to the pulp and juice.

If desired, make the vegetables into milk soups, using very little flour and fat.

8. Possible desserts include very simple forms of the following (an asterisk denotes a dessert made on a milk basis):

Apple, baked or stewed

*Cornstarch mold

*Custard (firm or soft)

*Custard derivatives, simple, such as:

Bread puddings

Cereal puddings (rice, etc.)

Tapioca puddings (tapioca cream, etc.)

Gelatin jelly (such as orange)

*Junket

Prune pulp

Puddings should be served with milk and very little, if any, sugar.

Serve a dessert but once a day.

9. Eggs and meat: At least two or three eggs should be served the child each week; a yolk of egg or a whole egg may be served daily. Eggs (all soft-cooked) may be given the child in any of the following forms:

Eggs cooked in the shell (water below boiling point)

Poached eggs (water below boiling point)

Scrambled eggs

Omelets

Egg timbales

Occasionally the mashed or grated yolk (mealy) of a very hard-boiled egg may be used.

The following is a typical breakfast menu containing an egg:

Farina

Egg, soft-poached or soft-cooked in the shell

One slice of stale bread, and butter

Glass of warm milk

Flora Rose, in *The Care and Feeding of Children* (Cornell Reading-Courses), suggests the following dietary for the third year:

7:00-8:00 A.M. Cereal with cream, milk to drink

or

Lightly cooked egg with toast and milk

10:00-11:00 A.M. Bread and milk

2:00 P.M. Lightly cooked egg, buttered baked potato, bread and milk, stewed fruit

or

Broiled scraped beef, mashed vegetables, as spinach, purée of peas or carrots, bread, milk, light pudding, as rice or bread pudding or junket or occasionally a simple ice cream

or

Bread and milk, baked potato and one other vegetable, small serving pudding

6:00-7:00 P.M. Bread and butter, milk

or

Cereal mush and milk

or

Bread and milk, and stewed prunes or apple sauce

See pages 14-15, Note 4, regarding time for introduction of meat in the feeding of children.

10. Another suggestion for a dinner menu is as follows:

Mutton broth

Baked potato

Stewed celery

Glass of milk

Baked apple (pared before or after being baked)

11. Pupil to estimate the cost of a day's rations, such as the following:

Breakfast:

$\frac{1}{4}$ c. orange juice

$\frac{1}{4}$ c. farina

$1\frac{1}{2}$ c. milk

Stale bread

Lunch (11:00 A.M.):

1 c. milk

Stale bread

inner:

1 c. dried-bean soup

Bread and butter

Rice pudding

Lunch (4:00 P.M.):

2 graham crackers

Supper:

Milk toast

Baked pear

12. See the following references for a detailed study of the caloric value and cost of menus for children of 2 to 4 years (as well as for older children of various ages): Mary Swartz Rose, *Feeding the Family*, and "The Feeding of Young Children," *Technical Education Bulletin No. 3*, Teachers College, Columbia University.

Pupil to supply data on a day's rations, using the following headings for a table:

INGREDIENTS	WEIGHT	PROTEIN GRAMS	FUEL VALUE (Calories)	COST
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STRAINED VEGETABLES

"When 2 years old he [the infant] may have most of the fresh green vegetables when thoroughly cooked and finely mashed."¹

The water in which vegetables have been boiled contains valuable mineral matter and should not be discarded. Hence the rule for green peas, cauliflower, and other mild-juiced vegetables: Boil them in a very small quantity of water so that *all* the water may easily be utilized; for example, in sauces or in soups.

Carrots

Method:

1. Boil the following ingredients together until the carrots are very tender:

½ lb. young carrots

2 c. slightly salted water, or 2 c. fat-free soup stock.

Add more liquid if the 2 c. liquid boil away before the carrots are done.

2. Press the carrots through a sieve, then add 1 t. bread crumbs and a little salt and butter.
3. Reheat vegetable, and serve.

Celery

Method:

1. Stew celery in a little water until it is tender, then press it through a sieve.
2. Add salt and a little cream, and serve.

Corn

Method:

1. Cook corn-on-the-cob (fresh, young, and sweet) in water until it is tender.
2. Score each row of kernels, and press out the pulp. (*Caution:* Do not retain any of the fiber.)
3. Add salt and butter or cream to the pulp, heat, and serve.

Spinach

Method:

1. Wash spinach, cover, and boil it in its own juice until it is tender. (If necessary, add a very little water so as to keep the vegetable from burning; see detailed recipe for spinach, *Diet for Invalids*.)
2. Chop spinach, then press it through a sieve; do not discard any of the juice.
3. To each quarter-cup of pulp and juice add 2 t. cream or melted butter, 2 t. fine bread crumbs, and a little salt.
4. Reheat vegetable, and serve.

¹From the quotation from the report of a committee of the American Medical Association given on page 11.

Peas

Method:

1. Press fresh-cooked or canned peas through a sieve.
2. Add salt and a little butter or cream to the pulp, beat well, place mixture in a buttered baking dish, and bake 20-30 min. in a moderate oven.

Asparagus

Method:

1. Secure $\frac{1}{4}$ c. asparagus pulp and $\frac{1}{4}$ c. concentrated asparagus water as follows:
 - a. Boil $\frac{1}{2}$ bunch asparagus until it is tender in 2 c. slightly salted water (or enough barely to cover the vegetable).
 - b. Remove the asparagus, then, using a fork or a knife, secure the pulp by gently scraping each stalk toward the tip. (Discard the coarse stalk.)
 - c. Boil down the water to $\frac{1}{4}$ c.
2. Prepare a white sauce (see Note 1) from the following ingredients:
 - 1 t. flour
 - 0-1 t. butter
 - $\frac{1}{4}$ c. milk
 - $\frac{1}{4}$ c. concentrated asparagus water
 - Salt
3. Dip two small slices of hot toast into the hot white sauce, then drain them.
4. Add $\frac{1}{4}$ c. asparagus pulp to the sauce remaining, reheat, pour over the toast, and serve.

Notes:

1. In making white sauce (and cream soup) for children, observe the following rules:
 - a. Use less fat than in cooking for adults.
 - b. Avoid cooking the fat to any extent, especially at a high temperature; hence use the dietetic method, as follows, for white sauce:
 - (1) Scald milk in a double boiler.
 - (2) Add a paste of cold milk and flour to the hot milk (using twice as much milk as flour in the paste).
 - (3) Stir the liquid in the double boiler until it is thick and thoroughly cooked, then add fat (if used), and serve.

For further details of the dietetic method (use of cold-liquid blend) for white sauce, see *Food Economy*, page 70.

2. Other vegetables (pulp and concentrated water), such as carrots, spinach, etc., may be substituted for asparagus in this recipe.

PART VI

DIET FOR THE CHILD FOUR TO EIGHT YEARS OF AGE

SUGGESTIONS FOR LESSONS

BREAKFAST CEREALS

3. General recipe for breakfast cereals

SOUPS

4. Celery or corn soup (Cream soup prepared from a non-acid juicy vegetable)
5. Tomato soup (a) with soda; (b) without soda (Cream soup prepared from an acid juicy vegetable)
6. Potato soup (Starchy-vegetable cream soup)
7. Peanut-butter soup (Protein-food cream soup). Broth: meat, oyster, or clam

CREAM TOASTS

8. Milk toast. Cream-of-peanut-butter toast. Brewis

SUGGESTIONS FOR A DAY'S MEALS

(Diet for the child four to eight years of age)

Breakfast (7:00 A.M.):

Fruit
Cereal (preferably oatmeal)
Milk to drink (cold or hot)
Dry breadstuff, with butter

Lunch (10:30 A.M.):

Milk
Dry breadstuff, with or without butter

Dinner (1:30 P.M.):

Soup—selected from the following:
 Simple cream soups (such as fresh-vegetable, peanut-butter, or dried-bean or pea)
 Broths (containing cereals or vegetables)
Dry breadstuff (such as croutons)
Soft-cooked egg
Starchy vegetable or a substitute
Mild juicy vegetable
Stale bread, with butter
Milk to drink (often omitted if a cream soup has been served)
Dessert, very simple

Supper (5:30 P.M.):

A milk-and-starchy-food combination
Milk to drink
Dessert

Notes:

1. Pupil to note the evolution of these meals from those suggested on page 43. Except for increase in quantities, foods for a child 4 to 8 years old differ very little from the foods given a child 2 to 4 years old; the suggested meals and Notes 2-8 (as well as the first part of Note 9), pages 43-45, apply to the diet of the child of 4 to 8 years as well as to the diet of the child 2 to 4 years of age. However, in cooking for the child of 4 to 8 years, the following foods may be included:

Desserts for dinner and supper:

Cake, plain (ginger, stale sponge, etc.)
Cookies, plain (such as ginger or molasses)
Fruits, mild (fresh or dried), cooked
Ice creams and milk sherbets (see Note 2, *Desserts*)
Irish-moss mold
Sandwiches, filled with fruit butter, jelly, or jam

Fruits for breakfast:

- Apples or sweet oranges, raw (fresh and ripe)
- Mild fresh fruits, well cooked (such as peaches or apricots)
- Dried fruits, stewed (apples, peaches, prunes, dates, etc.)

Vegetables, mild:

- Beans, strained
- Potatoes, creamed or escalloped
- Other vegetables, well cooked and mashed or strained
- Lettuce, fresh and tender (if thoroughly masticated)

2. Note miscellaneous points regarding foods for this age:

Cereals: See page 55, Note 6.

Cheese: A sprinkle of cheese is sometimes a good addition to baked rice (served to a child of 5 to 8 years).

Desserts: As a rule, these are served twice a day, not once only.

In feeding a child 5 to 8 years old, one or two pieces of candy may be given at the end of one meal a day, but candy should be forbidden at other times. (No candy should be given under 3 years of age.) In feeding a child 6 to 8 years old, chocolate or cocoa may be used in moderate quantities to flavor puddings.

Nuts (unless ground to a paste), preserves, and sirups should not be fed to children under 5 years of age, and only in small quantities to older children.

Frozen dishes should be very plain; for example, a simple custard ice cream is allowed. Frozen dishes should be served in small quantities and once a week only.

Eggs: Serve one a day. A little bacon may sometimes be served with an egg for a child over 5 years of age.

Fats: The following fats, if used in moderation, are valuable in the diet of a child 5 to 7 years old:

- Bacon fat (spread on bread or added to baked potato)
- Butter (as far as possible, spread on bread rather than used in cooking)
- Cream

Fruits, cooked: These should be prepared with little or no sugar.

Milk: The use of a quart each day is essential. It is often desirable to serve part of this milk in the form of beverages, such as milk flavored with a little cocoa, cereal coffee, or malted milk. (Sometimes a little whipped cream may be added to a beverage as a garnish.) Occasionally a child 4 to 8 years old refuses to drink milk. Pupil to plan a day's menus for such a child, making sure that 1 qt. milk is concealed in the dishes given.

Vegetables: Baked potatoes are more desirable than potatoes boiled and mashed.

Sometimes plain white sauce may be added to potatoes and other vegetables. (For the child 5 to 8 years old, macaroni mixed with white sauce is a possible potato substitute.)

3. In feeding a child of 5 to 7 years, the following time schedule is sometimes preferable to the one given on page 51: breakfast, 7:00 A.M.; dinner, 12:00 M.; lunch, 3:30 P.M.; supper, 5:30 P.M. So long as four meals a day are served, it matters little whether the lunch is served in the mid-morning or mid-afternoon.

4. Breakfast for school children should be *compulsory*, *nourishing*, and *eaten leisurely*. Malnutrition in children is often due to omission of breakfast or to an unsuitable one. Children have not reserve strength enough in their bodies to tide them over long periods without food.

BREAKFAST CEREALS

Breakfast cereals are essential in the diet of growing children.

General Recipe

Ingredients:

Boiling water }
Cereal } (See Note 1)

Salt ($\frac{1}{2}$ -1 t. salt to 1 c. water, or 1 t. salt to 1 c. raw cereal; salt is essential)

Method:

1. Put the boiling water and salt in the inner part of a double boiler and set the pan directly above the flame.

2. As soon as the water boils vigorously, slowly sprinkle in the cereal, stirring meanwhile. In the case of a finely ground cereal it is well to prevent lumps by adding the cereal in the form of a cold-water paste. Be careful not to add any cereal so rapidly that the water stops boiling; rapid motion of the water is essential for the following reasons:

a. It keeps the grains of cereal in motion so that they do not stick to the saucepan or cling to one another in lumps.

b. The boiling water touches all starch grains equally.

3. Boil the cereal 3-10 min. so as to swell the starch grains; the time varies with the cereal. Cook until the mass is thick and the separate flakes or grains of cereal do not settle. Stir a ground cereal almost constantly so as to prevent lumps and the sticking of the cereal to the bottom of the pan.

If a flaked cereal begins to settle, shake the saucepan, or lift mass gently with a fork; avoid crushing a flaked cereal by stirring with a spoon at this time or later.

4. After boiling the cereal 3-10 min., cover tight, and submit it to long-continued low temperature; for example, cook in a double boiler. As a rule, no stirring is necessary; if at all, stir only to prevent sticking to the bottom and possible lumping. The heavier the cereal, the longer the time required. The time varies from $\frac{1}{2}$ -8 hr.; $\frac{1}{2}$ hr. is the minimum.

CEREAL	TIME IN A DOUBLE BOILER
Finely ground.....	30-40 min.
Coarsely ground.....	2-6 hr.
Rolled.....	30-40 min.

(Cereals have a better flavor if cooked for a long time, for example, over night. Rolled oats may be cooked in 30-40 min., but the finest flavor develops only with a longer period of cooking.)

Notes:

1. Cereals grouped according to varying proportions of water used:

a. Finely ground cereals (requiring $3\frac{1}{2}$ -6 c. water to 1 c. cereal):

Barley grits	Hominy, fine grits
Corn meal	Oatmeal, fine steel-cut
Cream of wheat	Cream of barley
Farina	Vitos
Malt breakfast food	Etc.

Whole or coarsely ground cereals (requiring an average of 2-3 c. water to 1 c. cereal):

Barley, pearl	Oatmeal, coarse (sometimes parched before being cooked)
Hominy, or hulled corn	Wheat, cracked or whole
Hominy grits, coarse	Etc.
Rice	

c. Rolled or flaked cereals (requiring an average of 2 c. water to 1 c. cereal):

Oats, rolled
Wheat, flaked
Etc.

The quantity of water required varies as the weight of the cereal; hence finely ground cereals require more water than the other groups. The age of the cereal largely determines the weight. Proportions for class work are as follows:

6 tb. boiling water	4 tb. boiling water
1 tb. finely ground cereal	1 tb. flaked cereal
$\frac{1}{16}$ t. salt	$\frac{1}{16}$ t. salt

Why, as a rule, use a greater proportion of water in the small recipes than in the large?

2. Two methods of serving plain cereals:

As breakfast dishes

As vegetables (it is sometimes desirable to sauté hominy or rice for use in the diet of adults)

3. Fruits, prepared in small pieces, as a rule may be added to cereal; for example:

FRESH	DRIED	STEWED	BAKED OR STEAMED
Apples	Cherries	Apricots	Apples
Bananas	Dates	Peaches	Apricots
Peaches	Figs	Prunes	Figs
Pears	Raisins	Raspberries	Pears

Occasionally finely chopped nuts may be added to cereal for children over 8 years of age (and for adults).

Four methods of adding fruits or nuts:

Stir fruits or nuts into cereal just before it is served.

Place them in bottom of cereal bowl, then add hot cereal.

Place them on top of cereal after it is served.

Place them in molds, add cereal, and chill. (Turn out and serve with cream and sugar.)

Two methods of serving cereals containing chopped fruits or nuts:

Breakfast dish

Dessert (see rice pudding, etc.)

4. Three aids in making a dish of breakfast cereal into almost a perfect meal in itself:

Add cream or other fat to the cereal, since most cereals are deficient in fat.

Add milk to rice and other cereals low in protein.

Add fruit to polished rice and other cereals deficient in mineral matter. (See page 9, Note 4.)

5. An oatmeal cracker, served with cream, is an excellent ready-to-serve breakfast dish for use in children's diet.

6. Cereals for children: Serve on cereal salt and a choice of the following:

Thin cream

Whole milk

Top milk

Sugar, in great moderation¹

A little butter, sometimes

Avoid serving on cereal:

Sugar in excess

Sirup

Much butter (especially in combination with sugar)

"How are cereals to be given? Usually with milk or thin cream; always with plenty of salt, and with very little sugar — not over one-half teaspoonful on a saucerful of cereal. Cereals should not be served with sirups or butter and sugar."²

"With cereal, top milk or cream should be served, preferably without sugar; sirup and butter are undesirable as a rule."³

For reasons why it is not well to serve much sugar on cereals, see page 17, Note 4. Note, too, that excess sugar eaten on cereals cultivates in a child a taste for sweets, and that the whole diet of the child is more wholesome if sugar is taken in other ways than on cereals.

¹Some authorities allow no sugar on cereals for children, some a little.

Myrn Brockett, superintendent of the Mary Crane Nursery, Chicago, says of her experience at the nursery: "As a rule, all children over 2 years of age are allowed 1 rounded teaspoonful of sugar to a bowl (large serving) of oatmeal or other cereal. Children will eat much more cereal if permitted this sprinkle of sugar. Many children refuse cereal without sugar, but practically all children enjoy cereal (and thrive on it) when sugar is added."

This experience at the Crane Nursery is in accord with the principle advocated by Drs. L. Emmett Holt, Graham Lusk, L. E. La Fetra, and G. R. Pisek in *Feeding Children from Two to Seven Years Old* (published by the Bureau of Public Health Education, City of New York), in which leaflet they advise not more than 1 teaspoonful of sugar to a dish of cereal.

²L. Emmett Holt, *The Care and Feeding of Children*, page 138, from chapter on diet for children from the fourth to the tenth year.

³Mary S. Rose, *The Feeding of Young Children*.

CREAM SOUPS¹

General Recipe for Cream Soup

Ingredients:

(3 servings in bouillon cups)

$\frac{1}{4}$ c.	1 c. strained food pulp and juice, measured after being thinned with water or other liquid to the consistency of thin cream (see Notes 1 and 2)
	1 c. thin white sauce:
$\frac{3}{4}$ t.	1 tb. flour (see Note 3)
$\frac{3}{4}$ t.	1 tb. fat (see Notes 4 and 7, a, b)
$\frac{1}{4}$ c.	1 c. milk (see Note 2)
dash	$\frac{1}{8}$ - $\frac{1}{2}$ t. salt (probably less for very young children)

Method:

1. Blend the white sauce with the pulp, bring the mixture to the boiling point, then simmer 2-3 min. (see Note 7, f).

2. Add salt, strain if any lumps are visible, and serve at once. The soup is much lighter and creamier if beaten with a Dover beater just before it is served.

Notes:

1. The pulp of any food (meat, fish, vegetable, legume, etc.) may be used in this recipe. In most cases it is necessary to cook the food until it is very soft before putting it through the sieve. Most persons prefer to remove all the fiber from vegetables, etc., but a little of the whole corn, meat, or other solid food may be retained if desired; a few slices of cauliflower or other succulent vegetable may be served in the soup as a garnish.

Note the following points of economy:

- Tough vegetables, etc., may be used, since all the tough fiber is removed by the sieve.
- Either left-overs or fresh-cooked foods (vegetables, etc.) may be used.
- Any vegetables may be used, even beans in the pod and beets occasionally.

Sometimes the flavor of vegetable soups is improved if the vegetables are sautéed for a short time before being boiled.

2. Liquids for use in thinning the food pulp used in cream soups or in making the sauce include the following:

Milk (fresh or condensed)

Cream

Water (chief liquid in soups made from dried legumes)

Meat stock

Water in which vegetables have been cooked (all vegetable water is rich in mineral matter and is valuable for sauces as well as soups)

Tomato juice (often used in other than tomato soup)

Use these liquids singly or in any combination. Milk is usually the chief liquid used in making the white sauce.

¹For general notes on cream soups (classification, seasonings, garnishes, etc.) pertaining chiefly to adults' diet, see Appendix G, pages 210-213.

3. The flour in the given recipe for soup (which is as thin as thin cream) may vary in quantity from 0 to 1 tb. (Use 0 to $\frac{3}{4}$ t. in the class recipe.)

The quantity of flour (or of any one of the other thickening agents listed below) required for cream soups in general varies according to the following:

Desired thickness of soup; note the two types of soups:

Soups as thin as thin cream

Very thick cream soups, or purées (less often served than the thin soups)

Kind of vegetable (starchy or succulent)

Whether or not other thickening agents are used

Flour (wheat, rice, etc.) is generally used as the thickening agent in a cream soup, but other agents may be used; for example:

a. Starchy agents:

Arrowroot

Cornstarch

Crumbs, bread or cracker

b. Non-starchy agents (often used in diabetic diet for adults):

Yolks of eggs

Whole eggs

Irish moss

Any of these three agents may be used as the sole thickening agent, if desired.

The foregoing agents not only thicken the soup, but they bind it as well. This binding of a cream soup is essential, since the solid portion of soup will separate from the liquid portion, when allowed to stand, unless they are bound together. A paste composed of flour and fat is the usual binding agent.

The starch of cream soups (present either in the food pulp or in the flour or its substitute) should be well cooked.

4. The fat in the given recipe for soup may vary in quantity from 0 to 1 tb. Fat will float on top if more than 1 tb. fat is used to 1 tb. flour.

Possible fats for use in cream soups include:

Butter

Corn oil

Drippings

Nut margarine

Oleomargarine

5. Cream soups are a very economical source of nutriment and should be served often. They offer excellent opportunity for the use of left-overs. (Pupil to bring left-over protein foods, etc., from home.)

6. Extra nutriment, such as the following, may be added in moderate quantities to cream soups:

Plain cream

Whipped cream (added as a garnish usually)

Malted milk

Grated cheese (added to vegetable or other soup just before it is served)

Eggs:

Whites, beaten stiff and folded in just before the soup is served

Yolks, beaten or unbeaten

Whole egg, beaten or unbeaten

Yolk of egg or whole egg is added in the following manner:

- a. Mix a little cold liquid with the egg, then add a little of the hot soup.
 - b. Add this mixture to the remainder of soup just before the time for serving.
7. Note the following points in regard to the method for cream soups:
- a. In cooking for very young children (and for invalids), it is better to omit the fat (if used) from the white sauce and to add it to the soup just before it is served.
 - b. In preparing white sauce, made with or without fat, for use in children's diet (soups and other recipes), the dietetic method is the best method to use. (See *Food Economy*, page 70; see also Note 1, under "Asparagus," *Diet for Children*, page 48.)
 - c. In making 2 c. or more cream soup, it is safer to use a double boiler, so as to avoid the danger of lumping and scorching. (A similar rule is true for 2 c. or more white sauce or any other milk dish thickened with flour.)
 - d. Add salt the last thing in making cream soup or sauce and other milk dishes, since salt tends to curdle the milk. Salt precipitates casein.
 - e. Cream soups often have a curdled appearance if boiled too long; this is especially true if egg has been added to the soup.
 - f. In making soup (see recipes, pages 59-60) from the acid vegetable tomato, prepare a tomato sauce, using tomato pulp, fat, and flour, then add the milk to the sauce. Why is this the safest method?

8. Some cooks contend that cream soups are made more easily if white sauce is not used as a foundation. Pupil to suggest a cream-soup method in which white sauce is not used.

CREAM SOUPS PREPARED FROM NON-ACID JUICY VEGETABLES

General Recipe

Ingredients:

(3 servings in bouillon cups)

$\frac{1}{4}$ c.	1 c. strained vegetable pulp and juice, measured after being thinned to the consistency of thin cream with the water in which the vegetable was boiled (see Notes 1, 2, and 3)
	1 c. thin white sauce:
$\frac{3}{4}$ t.	1 tb. flour
$\frac{1}{2}$ t.	1 tb. fat
$\frac{1}{4}$ c.	1 c. milk or cream (stock, in part, if desired)
dash	$\frac{1}{8}$ - $\frac{1}{2}$ t. salt

Method:

1. Add the white sauce to the vegetable pulp and juice, and simmer mixture 2-5 min.
2. Add salt, and serve.

Notes:

1. Only the simplest of juicy vegetables should be used in preparing this soup. For definite suggestions as to juicy vegetables for children's soups, see Appendix G, page 211, Note 3.

2. To secure juicy-vegetable pulp and juice, add salt and a *little* water to vegetable, boil until it is tender, and press it through a sieve.

The water in which any succulent vegetable has been boiled, reduced by evaporation to a minimum, should be added to the vegetable pulp and juice for use in soup; this water is rich in mineral matter, hence it is essential that it be retained. If there is excess water left, boil it down, but do not throw it away. (*Caution:* Do not boil vegetable water too long, else the flavor is injured.) Even onion or cabbage water may be used; onion juice in soup does not leave a taste in the mouth as do onions themselves.

3. Left-over mashed vegetables may be used in making cream soups.

4. Cream-of-cabbage soup is almost as delicate as cream-of-cauliflower, and much cheaper.

5. Tomato soup is the only exception to the general method for juicy-vegetable soup; because of the acidity of tomatoes, tomato soup is prepared by the following special methods. (These methods apply only to cream-of-tomato soup; for bouillon, a tomato soup made without milk or cream, see *Diet for Adults*, page 128.)

CREAM SOUPS PREPARED FROM ACID JUICY VEGETABLES

Great care is required in the preparation of both the large and the small recipes for cream of tomato soups.

If tomatoes are very sour, add a very little sugar; for example, $\frac{1}{4}$ t. sugar to 1 c. soup made with or without soda. The sugar is added simply to counteract the acid taste, not to produce a sweet soup.

Tomato Soup Made with Soda

(3 servings in bouillon cups)

Ingredients:

$\frac{3}{4}$ t.	1 tb. flour
1 t.	1 tb. fat
3 tb.	1 c. strained stewed tomatoes (medium sour)
3 tb.	1 c. scalding hot milk (or thin cream)
dash	$\frac{1}{8}$ t. salt
dash	Paprika
spk.	$\frac{1}{8}$ t. baking soda

Method I:

1. Make a thin tomato sauce from the first three ingredients, including 1 min. of boiling in the process.

2. Add soda, then, stirring constantly, boil sauce $\frac{1}{2}$ min., or until the froth disappears.

3. With constant stirring, very slowly add the hot milk (drop by drop at first).

4. Boil $\frac{1}{2}$ min., season, and serve at once.

Method II:

1. Scald the strained tomatoes, add soda, and with constant stirring *boil* mixture $\frac{1}{2}$ min., or until the froth disappears.

2. Prepare a thin white sauce, then, stirring the sauce constantly, very slowly add the hot tomatoes to it; add drop by drop at first.

3. Boil $\frac{1}{2}$ min., season, and serve at once.

Notes:

1. Beware of using too much soda with either method, since soda, like other alkalies, has a very disagreeable flavor; if tomatoes have a low acid content, decrease the soda in the given recipe. If the tomatoes are very sour, increase the soda slightly.

2. Note advantages of soda:

- a. It neutralizes, or destroys, the acid which otherwise might curdle the soup. Thus it also reduces the acid flavor of soup.
- b. It lightens the color of the soup because of the gas carbon dioxide formed by the union of soda and acid (the introduction of any gas into foods in general lightens the color of the foods).

3. Note disadvantages of soda:

- a. It alters the flavor of the tomatoes.
- b. It is sometimes objectionable from the standpoint of digestion.
- c. It destroys the vitamins of tomatoes.

Tomato Soup Made without Soda**Ingredients:***(3 servings in bouillon cups)*

$\frac{3}{4}$ t.	2 tb. flour
1 t.	1 tb. fat
3 tb.	1 c. strained stewed tomatoes
3 tb.	1 c. milk (or thin cream)
dash	$\frac{1}{3}$ t. salt
dash	Paprika

Method:

1. From the first three ingredients prepare a tomato sauce as thick as thick cream; boil it *hard* 2-3 min. This thorough cooking is essential.
2. Add *cold* milk all at once (not slowly).
3. Stir the mixture rapidly over the fire until it is perfectly smooth. Do not be dismayed if, in the beginning, it looks like sour milk.
4. Add salt and paprika, and serve.

Note:

Fresh milk is essential.

STARCHY-VEGETABLE CREAM SOUPS**General Recipe****Ingredients:***(3 servings in bouillon cups)*

$\frac{1}{4}$ c.	1 c. strained vegetable pulp and juice, measured after being thinned with water or vegetable stock to the consistency of thin cream (see Notes 1 and 2)
	1 c. thin white sauce:
$\frac{1}{2}$ t.	2 t. flour (see Note 3)
$\frac{1}{2}$ t.	1 tb. fat
$\frac{1}{4}$ c.	1 c. milk (see Note 4)
dash	$\frac{1}{8}$ - $\frac{1}{2}$ t. salt (see Note 5)

Method:

1. Add white sauce to vegetable pulp and juice, and simmer mixture 2-5 min.
2. Add salt, and serve.

Notes:

1. Any of the following starchy vegetables (all of which are highly nutritious) may be used in this recipe (certain of these may not be desirable in cooking for children):

a. Starchy roots and tubers:

Artichoke, Jerusalem
 Dasheen
 Potatoes, sweet and white
 Yams

b. Dried legumes (rich in protein and fat as well as in starch):

Beans (lima, kidney, etc.)
 Lentils
 Peanuts, raw (soup made from these tastes much like bean soup)
 Peas (whole or split)

Canned or freshly cooked legumes may be used.

Lima beans cooked with carrots result in an attractive soup, yellow in color.

The pulp of the raw peanut is obtained in almost the same way as is the pulp from dried beans and other legumes, namely:

- a.* Soak shelled nuts over night in cold water to cover.
- b.* Drain, and add fresh water together with chopped onion and celery and a bit of bay leaf.
- c.* Simmer mixture 3-5 hr., or until peanuts are tender; two or more changes of water are desirable in order to remove pink coloring matter. (If preferred, boil mixture 10-15 min., and then cook it all night in the fireless cooker.)
- d.* Press mixture through a sieve in order to separate the pulp from the skins.

In cooking for children 4 to 8 years of age (and for adult invalids) it is well to strain dried legumes for use in soups, etc., so as to remove all skins; the skins are indigestible and irritating to delicate organs of digestion.

2. Authorities differ as to whether the water in which potatoes have been boiled shall be used as part of the liquid in cream-of-potato soup. Potato water darkens as soon as it is exposed to the air. This change is due to the oxidation of organic compounds present in the potato water. The products are not injurious, and the water may be used in soup.

3. Note that a very thin white sauce is used in this recipe, that is, that little flour is needed for binding the soup. Why? The quantity of flour in the recipe sometimes varies from 0 to 2 t.; for example:

- a.* Bean and certain other soups: 0-1 t. flour is sometimes used.
- b.* Peanut soup: Use a little more than 2 t. flour. (State composition of peanuts. Do peanuts and soy beans contain as much starch as other dried legumes?)
- c.* Potato soup: 1 t. flour to 1 c. milk is the usual proportion for the white sauce. (Use $\frac{1}{4}$ t. flour to $\frac{1}{4}$ c. milk in the class recipe.) It is not well to make potato soup without any flour, for the starch in potato has very little of the binding quality so essential in all cream soups.

4. Water is sometimes used in place of milk, especially in the case of dried legumes.

5. In cooking for adults, see Appendix G, page 212, Notes 4 and 5, for possible substitutes for vegetable pulp in this recipe and for suggestions as to seasonings.

PROTEIN-FOOD CREAM SOUPS

In combination with a breadstuff and butter, each of these soups in itself is almost a complete meal. Recipes for some of the more unusual soups follow.

Peanut-Butter Soup

Ingredients:

(1½ servings in bouillon cups)

½ tb.	2 tb. peanut butter
¼ t.	1 t. flour
¼ c.	1 c. cold milk
dash	⅓ t. salt, or to taste (use less than ⅓ t. if peanut butter is very salty)

Method:

1. Blend the flour with the peanut butter, then add about 2 tb. milk to make a smooth paste.
2. Slowly add the remainder of the milk.
3. Simmer mixture 3-5 min., or until it is slightly thickened; cook it 10-15 min. in a double boiler if preferred.
4. Add salt, strain soup if desired, and serve.

Notes:

1. Peanuts are so rich in oil that additional fat is not necessary in the soup. Peanut soup is really a white sauce with peanut butter in place of dairy butter or other fat.
2. An excellent soup can be made simply by cooking peanut butter and milk together, but since peanut butter is somewhat deficient in starch, it is better to add a little flour as a binding agent.
3. Water or chicken or veal stock may be substituted for part of the milk. Peanut soup made with skim milk is good and nutritious, and an excellent dish for "penny lunch-rooms."
4. In most cases it is doubtless an economy in money and time to use commercial rather than homemade peanut butter.
5. Almost any nuts, ground to a butter in a meat-grinder, may be substituted for peanut butter in this recipe; for example:

Almonds
Pecans
Pistachio nuts
Walnuts, English

Do all nut-butter soups require the same quantity of flour?

(Experiment with malted nuts.)

Peanuts, almonds, etc., may be ground to a fine meal rather than to a butter, but as a rule the butter is preferable in soup.

What is confectioners' almond paste? Can it be used in making cream soup?

6. Peanut butter is a product of roasted peanuts. For a soup prepared from raw peanuts, see recipe, page 60. Peanut-butter soup is the more desirable soup, since it is of finer flavor and requires much less time in the making.

7. Nut soup may be used as a meat substitute in a meal.

Peanut Butter

Method:

1. Shell freshly roasted peanuts, and remove brown skins.
2. Grind peanuts through a meat-grinder to make a velvety paste; if the pulp disk is used and is properly adjusted, one grinding is sufficient.
3. Add salt. Use the butter at once or place it in a refrigerator in a covered glass jar; it will keep several weeks, but not indefinitely.

Notes:

1. This is a popular class exercise. The recipe is so simple that even a small child can make good butter for use in the home.
2. If the roasted peanuts are at all stale, shell them, place them in a shallow pan, and bake them in a slow oven until they are crisp. (Peanuts may be roasted in the home. Roast them before or after shelling; use a moderate oven in either case, and stir often.)
3. See Appendix G, page 216, Note 4, for suggestions as to sandwich filling for adults.

Almond Butter

Method:

1. Shell almonds, and blanch them as follows:
 - a. Cover them with boiling water, let them stand 1-3 min., then drain, and plunge them into cold water.
 - b. Drain nuts, and remove brown skins.
2. Place nuts in a warming oven and let them stand until they are crisp and a very delicate brown (if preferred, do not allow the nuts to brown).
3. Reduce nuts to a velvety paste by grinding them through a meat-grinder; one grinding is sufficient if a fine disk and a high tension are used.
4. Add a little salt, and place butter in a refrigerator in a covered glass jar.

Notes:

1. Salted almonds also may be made into butter.
2. Use almond butter in soups, sandwiches, etc.

Cheese Soup

Ingredients:

(1½-2 servings in bouillon cups)

1-2 t.	2 tb.-⅓ c. rich cheese, grated or chopped (such as brick cream cheese)
	1 c. thin white sauce:
½ t.	1 tb. flour
½ t.	0-1 tb. fat
¼ c.	1 c. milk
dash	⅓ t. salt
dash	Paprika

Method:

1. Add the cheese to the sauce and stir mixture in a double boiler just until the cheese is melted, but cook no longer.
2. Season, strain, and serve at once.

Notes:

1. One beaten yolk of egg ($\frac{1}{4}$ t. in class recipe) may be added to the soup, if desired; add the hot soup to the yolk, beating constantly.
2. Stock may be used in place of part or all of the milk.
3. Cream-of-cheese soup is not always advisable for children, even if correctly made. In making the soup for a child of 4 to 8 years, use the minimum quantity of cheese and use no eggs. Do not give the soup in its richest state to any child under 12 years.
4. The proteins¹ in the following soup are equal in quantity to those in five-sixths of a pound of beef of average composition; the fuel value of the soup is higher than that of a pound of beef.

3 c. milk (or part milk and part stock)
 $1\frac{1}{2}$ tb. flour

1 c. grated cheese
 Salt and paprika

Oyster Soup*(3 servings in bouillon cups)***Ingredients:**

2 small oysters	1 c. oysters and liquor (avoid shells)
+ 1 t. liquor	
	1 c. thin white sauce:
$\frac{1}{2}$ t.	1 tb. flour (see Note 1)
$\frac{1}{2}$ t.	1-2 tb. fat
$\frac{1}{4}$ c.	1 c. milk or thin cream
dash	Salt to taste

Method:

1. Remove oysters from the liquor.
2. Heat liquor to the boiling point (see Note 2).
3. Mix the hot sauce, liquor, and oysters, and heat mixture in a double boiler until the gills of the oysters curl (see Note 4).
4. Season, and serve at once with toasted crackers.

Notes:

1. If desired, vary the flour from $\frac{1}{2}$ tb. to 2 tb. or more. The term stew is often applied to the recipe when flour is omitted, the entire thickening being composed of broken crackers, added just before the soup is served. Cornstarch or yolks of eggs may be used as thickening in place of flour or crackers.
2. It is essential that oyster liquor really boil before being mixed with any white sauce or milk, else a curdled soup is likely to result.
3. A very simple method for oyster soup is as follows:
 - a. Prepare a sauce from all the flour, fat, and oyster liquor.
 - b. Add cold milk to the sauce and bring mixture to the boiling point.
4. In soup-making, sautéing, and other methods of cooking avoid prolonged cooking of oysters at either a low or a high temperature. Some cooks contend that oysters have more flavor if submitted for a very short time to a high temperature—such as the boiling point of oyster soup.

¹Note 4 is adapted from *Farmers' Bulletin 487*, "Cheese and Its Economical Uses in the Diet," page 32, U.S. Department of Agriculture.

BROTHS

Simple broths are suitable for use in the diet of a child 4 to 8 years of age. Thick, rich meat - stock soups are undesirable.

Meat Broth

Method:

Follow the method for broth for infants, pages 38-39.

Notes:

1. The following ingredients, if thoroughly cooked and in small quantities, are possible additions:

Asparagus	Barley
Cauliflower	Macaroni
Celery	Rice
Onion	Sago
Spinach	Tapioca

2. All fat should be skimmed from a broth before it is served.
3. Milk is sometimes added to chicken or other broth.

Oyster Broth

Method:

1. Mix oyster liquor with an equal quantity of water.
2. Heat just to the scalding point, add salt, and serve.

Note:

Liquor, or juice, is usually found surrounding raw oysters; if it is lacking, chop raw oysters, heat them gently in a little water, then strain off the juice.

Clam Broth

Method:

1. Wash clams and place them in a granite basin.
2. Place basin either in an oven or in a steamer, and heat until the clam shells open.
3. Drain off the liquor from the clams, and add to it an equal quantity of warm water.
4. Scald, add salt and a few cracker crumbs as thickening, and serve.

Note:

Oyster broth may be made by this method by the substitution of oysters in the shell for clams.

CREAM TOASTS

Milk Toast

Method:

1. Toast stale bread slowly until it is golden brown and dry and crisp throughout.
2. Place toast in a hot dish, then, just before serving, cover it with scalded milk and sprinkle it with salt and bits of butter.
3. Garnish with parsley and paprika, and serve in hot dishes.

Notes:

1. Thin white sauce, a possible substitute for milk, should be poured over the toast a few minutes before it is served. A good class recipe for sauce is as follows:

$\frac{3}{4}$ t. flour

3 tb. milk

$\frac{3}{4}$ t. butter or a substitute

Dash of salt

2. Allow about $\frac{1}{4}$ c. milk or sauce to 1 slice toast.
3. A good method is to place milk in a hot pitcher and pour it over the toast at the table.
4. If desired, dip toast quickly into boiling salted water, drain, and add milk or sauce.
5. Dishes derived from, or similar in some respects to, milk toast include those listed below (toast may be substituted for the bread and crackers in brewis and creamed crackers, and, too, a yolk of egg, slightly beaten, may be added to either dish):

Water toast: Substitute boiling water for the milk of milk toast.

Cream toast: Substitute scalded cream for the milk of milk toast, and omit the butter.

Cream-of-fruit toast: Pour hot cream over toast, and add chopped dates. (In cooking for children over 8 years of age, chopped figs, raisins, prunes, etc., are possible substitutes for dates.)

Cream-of-peanut-butter toast: Spread hot toast with peanut butter, pour a thin white sauce over it, and serve.

Cream-of-tomato toast: Pour tomato sauce made with a little milk or cream over hot toast. Garnish with paprika and parsley.

Brewis: Break into small pieces several slices each of stale brown and white bread, place them in a double boiler, add milk or milk and water almost to cover, and cook until bread is soft and thoroughly hot. Add salt, pour into a hot bowl, add a little butter or cream, and serve.

Creamed crackers: Split butter crackers, and add butter and salt. Place them in a buttered baking dish, cover with milk, and bake slowly 30 min. (For adults pepper and cheese are possible additions to this dish.)

Souffléd crackers: Split common crackers and soak them 8 min. in ice water to cover. Dot the crackers with butter, and bake them in a hot oven until puffed and brown.

PART VII

DIET FOR THE CHILD EIGHT TO TWELVE YEARS OF AGE

SUGGESTIONS FOR LESSONS

EGG RECIPES

9. Goldenrod eggs. Rice with yolks of eggs
10. Eggs baked in artificial cups or nests
11. Poached eggs on toast
12. Scrambled eggs. Scrambled-egg omelet

MEAT AND FISH RECIPES

13. Scraped-meat balls
14. Beef or chicken stew
15. Boiled fish. Steamed fish. Baked fish

VEGETABLE RECIPES

16. Creamed vegetables:
 - a. Potatoes (starchy vegetable)
 - b. Celery or carrots (juicy vegetable)
17. Escalloped vegetables:
 - a. Potatoes or cauliflower (or other non-acid vegetable) with white sauce
 - b. Tomatoes (an acid vegetable) without white sauce

BEVERAGES

18. Cereal coffee. Cocoa-shell tea. Cocoa

DESSERTS MADE ON A MILK BASIS

19. Junket. Irish-moss mold
20. Plain cornstarch mold and derivatives
21. Rice pudding: with eggs; without eggs

DISHES FOR CHILDREN'S PARTIES

22. Sandwiches
23. Fruit salads
24. Charlottes
25. Sherbets
26. Baked Alaska

SUGGESTIONS FOR A DAY'S MEALS

(Diet for the child eight to twelve years of age)

Breakfast (7:00-7:30 A.M.):

Any mild, ripe fruit (raw or cooked)
Cereal (such as rolled oats)
Stale bread or dry toast, with butter
Milk or very weak cocoa

Dinner (12:00 M.-12:30 P.M.):

Protein food, selected from the following:

Egg, soft-cooked
Fish
Meat } (See Note 3)

Potatoes or a substitute,¹ such as:

Potatoes, white or sweet (baked)
Potatoes, boiled (mashed or creamed)
Macaroni or spaghetti (boiled)
Rice (boiled or steamed)
Bananas (baked)

Mild juicy vegetable

Bread and butter

Milk (if preferred, omit this and give a cream vegetable soup)

Dessert

Supper (5:30-6:00 P.M.):

A milk-and-starchy-food combination

Bread and butter

Milk to drink (often omitted)

Dessert

Notes:

1. Pupil to note the evolution of these meals from those suggested on page 51. (The older a child, the more complex the meals.) All foods allowed the younger child are also allowed the child 8 to 12 years old; but certain foods (meat, fish, raw vegetables, etc.) not given the younger child are given to the child of 8 to 12.

2. Three meals daily are sufficient for many children of 8 to 12 years. A mid-morning or mid-afternoon lunch, at which one of the following foods may be given, is sometimes necessary:

Crackers or dry bread

Milk

Fresh fruit (if the child is well)

¹By way of comparison, see *Food Economy*, page 49, Note 5, for a list of substitutes for white potatoes for use in adults' diet.

Dinner is served at noon rather than at night. If, occasionally, dinner must be served at night, it should not be later than 6:00 P.M.; a luncheon is served at noon in such a case. Except for a wider choice of hot dishes, a luncheon for this age is similar to a dinner for a child of 4 to 8 years.

3. Lean meat and fish, as follows, are allowable in the diet of a child 7 or 8 to 12 years of age:

Meat, broiled:

Beefsteak (rare)
Mutton or lamb chops (rare)
Hamburg steak
Chicken (preferably the light meat)

Meat, roasted:

Beef (rare)
Mutton or lamb
Chicken (preferably the light meat)

Meat, boiled

Meat, stewed (preferably mutton, beef, or chicken, with young vegetables; meat should be cut fine and all fat should be removed from the stew before it is served)

Fish (broiled, baked, boiled, or stewed), especially the light-colored varieties, such as:

Cod
Haddock
Halibut
Whitefish (preferable)

Oysters (broiled, etc.; fried oysters are forbidden)

Broiled or baked (roasted) meats and fish are usually preferable.

With some few children the following are sometimes allowable:

Sweetbreads (parboiled, then added to white sauce)
Turkey, squab, or pheasant

High seasonings should be avoided in stews and all other meat and fish dishes.

Fat hinders digestion, hence avoid:

Fat meats (except bacon occasionally)
Fat fish (dark fish contain more fat than the light-colored varieties)
Addition of fat to meats and fish
Rich sauces or gravies with meats or fish (platter gravy is allowable)

Meat should be served but once a day, and then only in small portions (not over an ounce to a child). Meat and fish should supplement milk, not displace it.

4. Note miscellaneous points regarding foods for children 8 to 12 years old:

Cheese: Rice or macaroni baked with a little cheese is permissible. Cheese of various kinds may be used in sandwiches for the older children of this period.

Desserts: A little more sugar may be allowed on desserts than in the diet of a younger child. A small piece of pure plain candy or plain sweet chocolate may be used as a dessert.

Fruits: Strongly acid fruits are forbidden, hence dates, figs, and raisins are useful. Raisins should always be cooked (stewed, used in puddings, etc.). If fruit is served as a dessert at the evening meal, cooked fruit (moderately sweetened) is preferable.

Milk: 1 qt. daily should be used.

Nuts: Peanut and other nut butters may be given, but unground nuts (largely because they are hard to masticate) should not be given freely.

Soups: Cream soups are often served for supper (or luncheon; see Note 2), and occasionally for dinner. If protein-food (oyster, etc.) cream soups are served for dinner, their protein value should be considered.

Broths (mutton, chicken, oyster, etc.) are an excellent dinner soup.

Vegetables: No *raw* vegetables (cabbage, radishes, onions, etc.) should be given before the tenth or twelfth year.

All mild, thoroughly cooked juicy vegetables, including turnips, are allowable for a child 8 to 12 years old; however, it is sometimes asserted that the following cooked vegetables should be forbidden a child under 10 years of age:

Beans, lima
Cabbage
Corn
Eggplant

5. For a study of the caloric value and cost of menus for this age, see authorities and suggestions given in Note 12, page 46.

6. Pupil to decide points *a*, *b*, and *c* in regard to the menus which follow:

- a.* Which menus do not conform to the foregoing scheme? (The majority of the menus given do conform; that is, they are correct for a child 8 to 12 years old.) Pupil, by making the necessary changes, to have all the menus conform to the scheme.
- b.* Which menus are especially adapted to the diet of the child who does not like milk as a beverage?
- c.* Which menus are especially adapted to summer and winter diets?

Breakfast menus:

Orange (sweet)		
Oatmeal		Cream
Toast		Cocoa
Baked apple		
Cracked wheat		Cream
Bread and butter		Milk
Stewed apricots, prunes, or raisins		
Cereal		Top milk
Bacon	Toast	Crust coffee or milk

Dinner menus:

Baked potatoes	Mutton stew (with carrots and celery)	
	Bread and butter	Milk
	Cooked rice with fruit-juice sauce	
Buttered beets	Mutton chops	Creamed potato balls
	Bread and butter	Milk
	Chocolate custard over toasted rolls	
Broiled meat balls, rare	Baked potatoes	Buttered turnips
	Bread and butter	
	Tapioca cream	Milk
Stewed chicken	Boiled rice	Green peas
	Bread and butter	
	Blueberry pudding	Milk
	Chicken rice-balls	Buttered carrots
	Toast	Milk
	Stewed pears	
Creamed chicken		Baked potatoes
	Sliced tomatoes	Bread and butter
	Bread pudding	Cocoa
Steamed fish	Baked potatoes	Spinach
	Bread and butter	Milk
	Rice or hominy pudding	
Baked fish	Baked potatoes	Sweet corn cut from the cobs
	Bread and butter	Milk
	Orange gelatin	
Boiled fish	Baked potatoes	Stewed tomatoes
	Bread and butter	
	Toast, with sugar and cinnamon	Apple water
Poached eggs in a nest of mashed potatoes	Cream-of-carrot soup	
	Bread and butter	Spinach, finely chopped
		Two pieces of simple candy
Eggs in boats	Cream-of-celery soup	Wafers
	Cauliflower	Bread and butter
	Irish-moss mold, with sweet grape juice as a sauce	
Foamy omelet	Oyster or clam broth	Wafers
	Mashed potatoes	Asparagus tips
	Bread and butter	Freshly stewed peaches
Goldenrod eggs	Mutton broth	Wafers
	Buttered cauliflower	Bread and butter
	Caramel junket	

Supper menus:

Cream-of-celery soup	Toast sticks	Bread and butter
Rice pudding		Milk
Cream-of-potato soup	Crackers	Bread and butter
Cottage pudding with orange sauce		Milk
Cream-of-dried-bean soup		Bread and butter
Bread pudding		Cocoa
Cream-of-tomato soup	Wafers	Bread and butter
Cinnamon rolls, with homemade jelly (or jelly sandwiches)		Milk
Spaghetti with cream-of-tomato sauce		
Bread and butter		Milk
Caramel custard	Lady fingers	
Brown bread and butter		Milk
	Figs	

Luncheon menus:

Chicken broth with rice and carrots		Zwieback
Scrambled eggs	Green peas, mashed	Bread and butter
	Corn flakes with fruit juice	
Cream-of-spinach soup		Croutons
Rice with yolks of eggs		Bread and butter
	Prune toast	
Orange soup		Cottage-cheese wafers
Graham muffins, with maple sirup or homemade caramel sirup		
Peas in turnip cups	Bread and butter	Milk
Orange sherbet		Sponge cake

Party menus:

Hot chicken sandwiches	Salted almonds	Olives
Rice Bavarian cream		Orangeade
Creamed oysters in toast boxes		Bread and butter sandwiches
	Ice-cream cones	
Fancy sandwiches		Lemonade tinted with grape juice
Caramel ice cream		Angel cake
Fruit salad	Sandwiches: cream-cheese; fig; nut and date	
	Glacé fruits and nuts	
Chicken sandwiches		Ribbon and roll sandwiches
Charlotte russe		Cocoa
Fillet of beef or crown of lamb		
Creamed potatoes		Bread and butter
Ice cream	Lady fingers	

EGGS

Goldenrod Eggs

Ingredients:

	Thin white sauce:
$\frac{1}{2}$ t.	1 tb. butter
$\frac{1}{2}$ - $\frac{3}{4}$ t.	1 tb. flour
dash	$\frac{1}{2}$ t. salt
dash	$\frac{1}{8}$ t. paprika
2 tb.	1 c. milk
$\frac{1}{4}$ egg	3 hard-cooked eggs (see Note 1)
1 slice	4 slices of toast
1 sprig	Parsley

Method:

1. Chop the whites of eggs and add them to the white sauce.
2. Place toast on a hot platter, add the sauce, and sprinkle the center of each slice with yolk pressed through a potato-ricer or a sieve (each pupil may use a small flour sieve as a ricer).
3. Garnish with parsley.

Notes:

1. To hard-cook eggs, cook them 15-20 min. in boiling water, or cook them 40-45 min. in water considerably below the boiling point. (See *Diet for Invalids*.)
2. Goldenrod eggs make an attractive dish for spring menus.
3. See *Food Economy*, pages 64-67, for other creamed protein foods.

Rice with Yolks of Eggs

(6-8 servings)

Ingredients:

2 tb.	$1\frac{1}{2}$ c. boiled or steamed rice (salted during the cooking)
$\frac{1}{2}$ t. yolk	4 hard-cooked yolks (see note)
	White sauce:
$\frac{1}{4}$ - $\frac{1}{2}$ t.	2 tb. butter
$\frac{1}{2}$ t.	2 tb. flour
dash	$\frac{1}{4}$ t. salt
2 tb.	1 c. milk

Method:

1. Place freshly cooked rice in a serving dish and pour the sauce over it; heat cold left-over rice in the sauce.
2. Sprinkle the yolks with salt, press them through a sieve or ricer, and use as a garnish for the rice. (If preferred, cut the yolks in halves and use as a garnish.)
3. Bake mixture 2-3 min., garnish with parsley, and serve.

Note:

To prepare the yolks of eggs, cook the yolks in salted, simmering water 20 min., or until they are mealy and dry; beware of breaking the membranes as the yolks are dropped into the water.

Beaten Egg Steamed**Ingredients:**

$\frac{1}{2}$ yolk	1 yolk of egg, beaten very light
$\frac{1}{2}$ white	1 white of egg, beaten stiff
dash	Salt

Method:

1. Fold the white and salt into the yolk the same as for omelet.
2. Pour mixture into a well-buttered ramekin.
3. Set ramekin in a pan of simmering water, cover, and let recipe cook 8-10 min., or until it is very light and firm. Do not allow the water to rise above the simmering point.

Note:

Show that this recipe is closely related both to a plain soufflé and to a foamy omelet (as well as to an omelet soufflé).

Eggs Baked in Artificial Cups or Nests**Method:**

1. Prepare cups in any of the following ways:
 - a. Scoop out the top of a baked potato.
 - b. Form any of the following into a ball or cube, scoop out the top, then cover the outside surface of mold with buttered crumbs:
 - Cereal, left-over cooked (such as rice or corn meal)
 - Flour paste, cooked (such as macaroni or spaghetti)
 - Potato, mashed and well seasoned
 - c. Scoop out the top of a cube of stale bread, then toast the box on all sides.
 - d. Scoop out the top of a roll. (If preferred, split a long finger roll in halves, and scoop out the center of each half, thus forming two cups or boats.)
 - e. Cut a slice from the stem end of a medium tomato and remove part of the pulp. (Sprinkle the inside of the tomato cup with salt; in cooking for adults, pepper, onion juice, and chopped parsley are possible additions.)
 - f. Add $\frac{1}{8}$ t. salt to a white of egg and beat the white until it is stiff. Heap the white on a slice of buttered toast, then make a hollow in the top of it.

2. Break a raw unbeaten egg into each of the cups. (In the case of the white-of-egg nest, use a yolk only, if preferred. Do not break membrane of yolk.)

3. Bake the eggs in a slow oven for a few minutes until they are set; the buttered crumbs in step 1, *b*, should brown, and the beaten white of egg in step 1, *f*, should become firm and slightly brown.

4. Garnish with any of the following:

Parsley

Curled celery (good with tomato cups)

Bacon (good with the boats made from rolls)

Paprika (if used very sparingly)

5. Serve the eggs hot. The tomato cup may be placed on a round of buttered toast before being served. (If preferred, the tomato may be put into the oven on a round of bread brushed over with melted butter.)

Notes:

1. If desired, baste the eggs with melted butter during the baking process.
2. The acid of the tomato helps to harden the egg albumin.
3. Is the egg-in-tomato cup always advisable in children's diet?

Egg-in-the-Nest

(*Not baked*)

Ingredients:

- 1 yolk of egg, cooked whole in boiling salted water until hard and mealy (see Note 2)
- 1 white of egg beaten stiff

Method:

1. Drop beaten white by the spoonful into a basin of water at the simmering point; turn out the gas, cover, and poach 2-5 min., or until egg is light and firm, but not tough.

2. Drain white and place it on hot buttered toast.

3. Drop the yolk into the center of the white, add salt, and serve at once.

Notes:

1. The egg should be fresh and cold.
2. Beware of breaking the yolk. Retain the yolk in half of the shell, not in a dish, while slipping it into the water.

Eggs Baked in Ramekins

Method:

1. Drop one raw egg into each buttered ramekin, being careful not to break the yolks.

2. Add salt and 2-3 tb. cream to each egg.

3. Bake eggs in a slow oven until they are jellied; avoid toughening the eggs.

Note:

What are shirred eggs? (See any standard cookbook.)

Poached Eggs

Method:

1. Fill a sautéing pan one-half to two-thirds full of boiling salted water, using $\frac{1}{3}$ t. salt to 1 c. water.
2. Butter several English muffin rings and place them side by side on the bottom of the pan; the water should cover the rings.
3. Break fresh eggs into separate saucers.
4. Turn out gas, and, being careful not to break the yolks, slip an egg into each ring.
5. Cover pan, and place it over a flame which will keep the water just below the boiling point, for example, 190° F., or 88° C.; do not allow the water to boil. Cook eggs 5-6 min., or until the whites are firm and jelly-like and the yolks are almost hidden from view by a white film. If hard eggs for use in adults' diet are desired, let eggs stand 10 min. or longer. (In order that a film may be formed it is necessary that the eggs be covered with water during the entire process. Basting is not necessary if the pan contains enough water.)
6. Butter a skimmer or griddlecake turner and slip it in turn beneath each egg and its ring; drain well, and slip both egg and ring upon a slice (such as a round) of buttered toast placed on a hot plate.
7. Remove rings, sprinkle eggs with salt and bits of butter, and garnish with toast points, sprigs of parsley, or curled celery.

Notes:

1. Any of the rules as to temperature for cooking eggs in the shell may also be applied to poaching and other methods for cooking eggs. Eggs that are cooked slowly in water below 212° F., or 100° C., are of better flavor than the tougher products which result from high temperatures. Note objections to poaching in boiling water:

Egg is torn to pieces in the beginning.

Egg is finally toughened.

Define the term "poached." Define basting.

2. Do not handle the egg roughly at any step, else the yolk is likely to break.

3. Eggs may be served on any of the following:

Toast, cut round or square

Shredded wheat biscuit, toasted

Cereal flakes, toasted (such as corn or wheat)

Mound of any of the following:

Cereal, cooked (such as rice)

Flour paste, cooked (macaroni or spaghetti)

Potatoes, mashed

Spinach, boiled and minced

4. Note possible utensils for keeping the egg round in poaching:

A patented egg-poacher

A buttered poaching cup, muffin ring, or cooky-cutter

A large spoon

The egg can be successfully poached without the aid of any of these utensils. When none of the utensils is used, a little vinegar is sometimes added to poaching water; acid

hardens albumin and thus preserves the shape of egg. Beware of the use of an iron pan with vinegar or of excess vinegar.

5. Unbeaten egg steamed, similar to poached egg, is prepared as follows:

- a. Butter a ramekin or a small muffin tin, cup, or saucer.
- b. Drop a raw egg into it and add salt and bits of butter.
- c. Steam it as one would a custard; that is, place the utensil in a pan of water just below the boiling point, cover, and steam several minutes in oven or on top of range.

Precautions: Do not boil the water at any time. If a saucer is used, an inverted bowl should be placed under it.

6. For variations for use chiefly in adults' diet, see Appendix G, page 213, Note 1.

Poached Eggs with Tomato Sauce

(For older children or adults)

Ingredients:

$\frac{1}{4}$ c.	2 c. strained, stewed tomatoes
1 t.	3 tb. sweet green pepper, shredded
dash	Salt
spk.	Paprika
dash	Sprinkle of sugar
$\frac{1}{2}$ slice	4 slices toast, round or diamond-shaped
$\frac{1}{2}$ egg	4 eggs, poached in water
$\frac{1}{8}$ t.	1 t. lemon juice
$\frac{3}{8}$ t.	1 tb. butter

Method:

1. Simmer a mixture of the first five ingredients until it is reduced one-half in volume.
2. Place the tomato mixture on a platter, and arrange the toast on top.
3. Place a poached egg upon each slice of toast.
4. Sprinkle eggs with lemon juice, bits of butter, salt, and paprika.
5. Garnish with parsley, and serve.

Scrambled Eggs

Ingredients:

$\frac{1}{2}$ egg	4 eggs
1 tb.	$\frac{1}{2}$ c. milk or cream
dash	$\frac{1}{8}$ t. salt
$\frac{1}{4}$ t.	0-2 tb. butter

Method:

1. Beat eggs slightly, and add salt and milk or cream.
2. Melt butter in a double boiler, and add egg mixture.
3. Cook mixture in the double boiler until it is creamy, keeping it in large

flakes as far as possible; scrape the thickened mixture from the bottom and sides as rapidly as it forms. Do not beat or stir too much, else the flakes will be destroyed.

4. Serve at once, on toast if desired.

Notes:

1. Another possible method for use with scrambled eggs is as follows:

- a. Scald milk in a double boiler.
- b. Add butter, salt, and hot milk to well-beaten eggs.
- c. Cook mixture in a double boiler until it is creamy.

2. Eggs are always better scrambled at a low temperature, for example, in a double boiler. (Why?)

3. Either the yolks or whites alone may be used, if preferred to the whole eggs. Water is sometimes substituted for part of the milk or cream.

4. For additions to this recipe and the two succeeding recipes, for use in adults' diet, see Appendix G, page 213, Note 2.

Scrambled-Egg Omelet

Ingredients:

$\frac{1}{2}$ egg	4 eggs
$1\frac{1}{2}$ t.	4 tb. milk or cream (or water)
dash	$\frac{1}{8}$ t. salt
$\frac{1}{4}$ t.	$1\frac{1}{2}$ t. butter (or a little more if the omelet begins to stick to the pan)

Method:

1. Beat the yolks and whites of eggs together until they are very light; if preferred, beat them only slightly.

2. Add the salt and milk or cream (or water) and pour mixture into a hot sautéing pan in which the butter has been melted.

3. Heating slowly, and allowing the raw portion to slip underneath all the time, pick up the cooked portions with a fork or spatula; work quickly.

4. When the entire mixture is creamy and firm and the under surface is smooth and set, fold omelet in half, or roll it like a jelly roll. (See Notes 3 and 4.)

5. Turn omelet upon a hot platter by inverting first the platter and then the pan.

6. Garnish with parsley and serve at once. (Why serve at once?)

Notes:

1. This omelet differs from scrambled eggs in that it is lighter in texture. What are the causes of this lightness?

2. Use a low temperature throughout; it is well to use an asbestos mat.

3. Avoid overcooking the omelet, else it will so harden in lumps that it cannot be folded.

4. Do not stir the omelet for the last minute before it is folded, since it will break in folding unless the under side is allowed to harden or set for a short time.

5. The class recipe is so small that it must be cooked on one side only of a sautéing pan. Fold it in half before serving.

Spanish Eggs**Ingredients:**

$\frac{1}{2}$ egg	4 eggs
1-2 t.	$\frac{1}{3}$ c. strained tomato pulp
dash	$\frac{1}{8}$ t. salt
$\frac{1}{4}$ t.	0-2 tb. butter

Method:

Follow the method for scrambled eggs, page 78.

Notes:

1. Beware of overcooking the mixture, else it will be tough.
2. This recipe is derived from scrambled eggs, page 78, by the substitution of tomato juice for the milk or cream. Less liquid is used than in plain scrambled eggs because the acid of tomato juice toughens eggs.

MEAT AND FISH

Scraped-Meat Balls

Method:

1. Remove fat from round steak or other meat.
2. Wipe meat, place it on a meat board, and separate the red pulp from the tough white connective tissue by scraping gently with a silver knife or spoon.
3. Make the pulp into small, flat cakes $\frac{1}{2}$ " thick, broil them 2-3 min., then add salt and serve. Avoid overcooking and the addition of any fat.

Notes:

1. Avoid adding salt in the beginning to any broiled meat, since salt extracts the juice and so toughens the meat.
2. What are the advantages of scraped meat?
3. *a.* Give scraped-meat balls to younger children. Such balls, cooked rare, are sometimes recommended for very young children, even those in the second year.
b. Give non-scraped-meat balls to older children. (These ordinary meat balls are prepared in the same way as scraped-meat balls except that the meat is ground, not scraped. A little butter, also lemon juice, is sometimes added to the cooked balls.)
4. Scraped-meat balls are useful in invalids' diet as well as in children's diet.

Meat Stew

Method:

1. Secure a tender cut of beef, mutton, or lamb.
2. Remove all fat, and cut the meat into $\frac{1}{4}$ "- $\frac{1}{3}$ " cubes.
3. Barely cover with water, put lid on pan, and simmer meat until it is very tender.
4. Add salt and serve.

Note:

Any of the following ingredients, cut into small pieces, may be added in the beginning or soon afterward:

Carrots	Parsley
Cauliflower	Potato
Celery	Spinach
Onion	Etc.

Chicken Stew

Method:

1. Cut up a dressed chicken, following the same rules as for a cooked chicken (see *Diet for Adults*, pages 32-33).

2. Stew the chicken, using the following general rules:

- a.* Cover chicken with hot or cold water, then bring it quickly to the boiling point.
- b.* Reduce temperature to 180° F. (82° C.), or simmering point, and keep stew at this temperature until meat is tender.
- c.* Add salt and paprika, remove meat, and thicken gravy.

Pressed Chicken**Method:**

1. Cut up a raw 3¼ lb. chicken into pieces such as are used for stew.
2. Barely cover them with water, put lid on pan, and simmer chicken until the meat falls from the bones.
3. Drain the meat and remove the bones.
4. Cut the meat into neat slices, or chop it fine if preferred.
5. Season the meat with celery salt, 2 t. lemon juice, and salt to taste (about 2 t.), then place it in an oblong bread pan.
6. Boil down the chicken liquor to 1 c.
7. Dissolve in this 1 c. boiling-hot liquor 4 t. granulated gelatin previously soaked in 4 tb. cold water.
8. Pour liquor over the meat and press hard, then add a heavy weight and let mold stand in a cold place until it is firm.
9. Turn mold out upon a platter and garnish with parsley and slices of lemon. Slice.

Notes:

1. This recipe is excellent for use in packing children's lunch boxes.
2. The recipe yields a very firm mold; if a mold less solid with meat is preferred, boil down the liquor to 1½-2 c. rather than to 1 c.
3. For variations for use in adults' diet, see Appendix G, page 213, Note 3.

Cold Creamed Chicken**Method:**

1. Dip slices of light (or dark) meat of chicken into a thick rich cream sauce to which yolk of egg has been added.
2. Place slices on platter, garnish, and chill.

Boiled Fish**Method:**

1. Clean fish and tie it in cheesecloth.
2. Carefully lower the fish into boiling water to cover, using a wire basket, if desired. Reduce temperature at once; do not boil fish. To each quart of water used, add the following:
 - 1 t. salt (adds to flavor of fish)
 - 1 tb. vinegar or lemon juice (helps to keep fish white)

3. Cover and simmer fish, 180° F., or 82° C., only until the flesh begins to slip away from the bone (see Note 4).
4. Lift fish from water by means of the cheesecloth.
5. Drain, and place fish on a hot platter. Remove skin, if desired.
6. Garnish with parsley and slices of egg and lemon.

Notes:

1. A better title for this recipe is "simmered fish." Note two reasons for not boiling fish:

Protein is toughened.

Fish is torn to pieces.

2. Fish for boiling:

Thick slices of large fish (halibut, etc.)

Whole small fish, with the heads and tails usually removed (bass, cod, haddock, etc., are often small enough to cook whole)

3. The time required for cooking the fish varies according to the size and thickness of fish. The average time for a thick slice is 30-40 min. On an average, allow 6-8 min. of simmering to each pound of fish.

4. **Caution:** Do not overcook any fish. An overboiled fish is soft and watery. Fish cooked by boiling, broiling, or any other method is done the instant the flesh separates easily from the bone; it is overdone if the flakes fall apart easily. (Fish varies in the dryness of the flesh, but there is no such thing as tough fish.)

5. For variations for use in adults' diet, see Appendix G, page 214, Note 5.

Steamed Fish

Method:

1. Wash the fish and dry it with a cloth.
2. Rub it with salt and pepper, and lay strips of salt pork (half lean) on top.
3. Spread on a plate a piece of cheesecloth a little larger than the plate, lay fish on the cloth, and set the whole in a steamer.
4. Cook fish until it is done (see Note 4 of preceding recipe), allowing 15-25 min. for a 2-lb. fish.

Notes:

1. Skin the fish and remove bones before steaming, if desired.
2. In class line a small sieve with cheesecloth, put in fish, cover sieve, and steam over a deep saucepan of boiling water.

Baked Fish

Method:

1. Wash fish, dry it, and dredge it with a mixture of salt and flour.
2. Place fish on one of the following (either is an aid in lifting the fish from pan after baking):
 - Strips of muslin or cheesecloth
 - Greased fish sheet
3. Place fish on a greased rack in a dripping pan.

4. Lay strips of fat salt pork on the fish, the same as over a roast of meat; this fat dispenses with all or nearly all need of basting. If the fish so dries on top that it must be basted, baste every 10–15 min. with a mixture of butter or other fat and a very little water.

5. Cover utensil, and bake the fish in a hot oven until the flesh separates readily from the bones when tested with a fork; as a rule, allow 10–12 min. to a pound of fish.

6. Place fish on a platter, remove any string or skewers, and garnish with any of the following:

Potato roses or other border-garnish (see recipe below)

Parsley or cress

Slices of egg or lemon

Egg sauce, very simple (used in moderation)

Notes:

1. The head and tail (but not fins) are often left on the fish. If the head and tail are retained, the fish may be skewered into the form of a letter *S* before being baked.

2. If desired, bone the fish before it is baked.

3. If the fish is at all oily, omit the strips of pork.

4. For stuffed and planked fish for use in adults' diet, see Appendix G, page 214, Notes 6 and 7.

Potato Border-Garnish

(A derivative of mashed potatoes)

Method:

1. Boil potatoes (white or sweet), mash them well, add seasonings, and whip until they are very light. A good proportion consists of the following:

1 c. mashed potatoes

1½ tb. butter

1 or 2 yolks of eggs, beaten (or 1 whole egg)

¼ t. salt

If the potatoes are very dry, it is sometimes necessary to add a little hot milk or cream.

2. Place mixture in a pastry bag and shape it on a well-buttered tin into roses, rings, or a plain or fancy border.

3. Sprinkle the forms with paprika and brown in oven; if desired, brush them with yolk or white of egg before they are baked.

4. Remove the forms with a spatula and use them (together with parsley) as a border-garnish for various fish, meat, and egg dishes. Potato roses are popular with baked fish.

Note:

Squash border-garnish (but not carrot) may be prepared by this same method. Experiment with other vegetables.

MEAT AND FISH FOR CHILDREN: A SYNOPSIS

This synopsis deals with the choice of, and methods for cooking, meat and fish for children. (Reasons for the various suggestions are included in the parenthetical clauses.)

1. Buy fresh meat and fish. (There is danger of bacteria and ptomaine poisons from stale meat and fish.)

2. Buy tender cuts of meat in preference to tough cuts. (Proper cooking of tough cuts is often neglected.)

3. Buy meat of short fiber rather than of long fiber. (Short-fibered meat, such as squab and light meat of chicken, is more easily digested.)

4. Serve young children the light meat of chicken and turkey rather than the dark. (The light meat contains less fat and connective tissue than the dark, hence it is likely to be somewhat more rapidly digested, at least in the stomach.)

5. Scrape or chop fresh meats in many cases; see, for example, use of Hamburg steak. (Most children are careless about chewing meat. Chopping of meat averts danger of this kind.)

6. Avoid left-overs in meat and fish, especially in hot weather, even though the foods are kept in the refrigerator. (Refrigerator may not be in a sanitary condition; and, too, ptomaines are likely to result from decomposing protein foods.)

7. Avoid any other than platter gravy. (The high fat content of most other gravies is injurious.)

8. Avoid high seasonings. (High seasonings irritate the digestive organs and pervert the appetite.)

9. Avoid fat, observing the following rules. (Excess fat, such as that found in fat pork, duck, and goose, hinders digestion. Children also dislike animal fat, as a rule.)

a. Buy meats and fish containing but little fat, and serve chiefly the lean parts (see Note 3).

b. Avoid the addition of fat in the cooking of meat and fish. The following methods are excellent in that no fat need be added:

Grill-broiling

Pan-broiling

Roasting

Boiling

Grill-broiling is preferable to pan-broiling in the preparation of meat for children and invalids because the meat is kept so very free from fat. This applies to steaks, chops, meat balls, etc.

Notes:

1. The meat of *very* young animals, such as veal, is sometimes objectionable in that, because of its slippery quality, it may be swallowed without being masticated. (Note similar objection to hot breads.)

2. See *Food Economy*, pages 107-110, for further notes on meats.

3. The following table gives a method of classifying vertebrate fish according to richness in fat:

MUCH FAT (Over 5 per cent)	MEDIUM QUANTITY OF FAT (Between 2 and 5 per cent)	VERY LITTLE FAT (Less than 2 per cent)

Let the pupil tabulate the following-named fish¹ according to the foregoing headings:

Bass, black	Salmon
Cod	Sardines
Haddock	Shad
Halibut	Smelts
Herring	Trout
Mackerel	Tuna
Perch	Weakfish
Pickarel	Whitefish

Let the pupil list six to eight examples of each of the following:

- a. Dark, or oily, fish (more oil is found in this than in light-colored fish, and this oil is found throughout the body)
- b. Light-colored fish (the oil in this is found chiefly in the liver; see page 70, Note 3)

(Use only light-colored fish in cooking for children and invalids.)

4. Many of the suggestions given in this synopsis are also applicable in the diets for old age, indigestion, malnutrition, and invalids' diets in general.

¹For additions to the list of fish, see "The Chemical Composition of American Food Materials," *Bulletin No. 28*, U.S. Department of Agriculture, Office of Experiment Stations.

VEGETABLES

Vegetables, because of their mineral-matter content and other nutrients, are essential in children's diet; for example, spinach and other leafy vegetables are valued for their iron and the vitamins classed as fat-soluble A.

Very often children have to be taught to eat vegetables; note ways of serving vegetables to children who do not like plain boiled or steamed vegetables:

In meat stews	In gravies
In meat soups (such as Scotch broth)	Creamed on toast
Escalloped	In cream soups

NON-ACID VEGETABLES CREAMED

General Recipe

Method:

1. Cut a hot or cold (left-over) cooked vegetable in small pieces, such as $\frac{1}{2}$ " cubes, $\frac{1}{4}$ " slices, or small balls; if desired, strain peas and corn (see Notes 1 and 2).

2. Almost cover the vegetable with a medium white sauce (hot) (see Note 4) or hot cream or milk, and heat the mixture 3-4 min.

3. Add salt, and garnish with sprigs of parsley. If desired, serve the vegetable on a slice of toast or in a toast box or croustade (see *Food Economy*, page 64, for use of Swedish timbales, etc., in diet for adults).

Notes:

1. Various vegetables, such as the following, may be creamed singly or in any suitable combination; the use of certain of these vegetables (such as cabbage, corn, and turnips) is sometimes questionable in children's diet, particularly for younger children:

Beans, string	Corn
Cabbage (see Note 2)	Onions
Carrots	Peas, green
Cauliflower	Potatoes
Celery	Turnips

As a rule, cold or left-over cooked vegetables (boiled, steamed, or baked) are used; however, freshly cooked or canned vegetables may be used. Baked potatoes are especially good for creaming.

Certain raw vegetables, such as potatoes, carrots, and turnips, may be cubed, boiled or steamed, and then creamed; or raw vegetable balls may be formed and creamed as follows:

- Pare a vegetable and form small balls from it by means of a French vegetable scoop or cutter.
- Boil or steam balls until they are tender.

- c. Drain balls, and cream them according to steps 2 and 3 of the foregoing general method. Note the following class recipe:

3 or 4 vegetable balls

White sauce (two recipes are given):

$\frac{1}{2}$ t. flour	$\frac{3}{4}$ t. flour
$\frac{1}{2}$ t. butter or a substitute	$\frac{3}{4}$ t. butter or a substitute
2 tb. milk	3 tb. milk

Salt

Parsley, chopped fine

2. Cabbage should be boiled for a short time only, for example, 10-15 min. See recipe, *Diet for Adults*, page 149.
3. Salt and butter are the only seasonings for vegetables allowable for young children.
4. All white sauces for children should be made by the dietetic method (see *Food Economy*, pages 70-71; see also Note 1, under "Asparagus," *Diet for Children*, page 48).
5. For variations for use chiefly in adults' diet, see Appendix G, page 215, Note 1.

NON-ACID VEGETABLES ESCALLOPED

(Milk or white sauce used)

General Recipe

Method.

1. Cut a hot or cold (left-over) cooked vegetable in small pieces, such as $\frac{1}{2}$ " cubes, $\frac{1}{4}$ " slices, or small balls; if desired, strain peas and corn (see foregoing Notes 1 and 2).
2. Place alternate layers of the following in a buttered baking dish:
 - Vegetable
 - Seasonings (see foregoing Note 3)
 - Hot milk or cream or medium white sauce (see foregoing Note 4)
3. Cover mixture with buttered crumbs, and bake it 10-15 min., or until it is brown and hot throughout.

Notes:

1. Inasmuch as this recipe is a derivative of non-acid vegetables creamed, Notes 1-5 of the recipe on page 87 also apply here. Note an exception to the first of these general rules for vegetables: certain *raw* vegetables, such as potatoes and corn, may be escalloped.
2. Tomato sauce, or simply strained tomato pulp, is often substituted for milk, cream, or white sauce in the preparation of escalloped cabbage and other vegetables; the acid is of use in disintegrating the cellulose.
3. See *Food Economy*, page 80, for a method for escalloped dishes in general.
4. The following specific recipes for potatoes and onions are typical of all recipes for starchy vegetables and juicy vegetables, respectively.

Escalloped Potatoes

Method:

1. Wash, pare, soak until crisp (if wilted), and cut raw potatoes in $\frac{1}{8}$ "- $\frac{1}{4}$ " slices. A slicer (ordinarily used for potato chips) is a convenience.

2. Place a layer of potato slices in a buttered baking dish and sprinkle it with flour, salt, and small bits of butter (see page 88, Note 3).
3. Repeat putting in alternate layers of potatoes, flour, and seasonings.
4. Add hot milk almost to cover, and bake potatoes $1\frac{1}{4}$ hr., or until they are tender and brown.

Note:

Cold (left-over) cooked potatoes may be substituted for the raw potatoes, but the resultant dish is not so good.

Escalloped Onions**Method:**

1. Boil onions until they are tender, then slice or chop them; Spanish onions are attractive left whole.
2. Almost fill a baking dish with alternate layers of onions, white sauce, and seasonings (chopped parsley, etc.), then cover the top with buttered crumbs.
3. Bake mixture 10–15 min., or until it is brown and hot throughout.

Note:

In cooking for adults, and occasionally for older children, grated cheese (sprinkled over the buttered crumbs) is often a good addition to this recipe.

ACID VEGETABLES ESCALLOPED

(Milk or white sauce not used)

Escalloped Tomatoes**Method:**

1. Scald, peel, slice tomatoes, and place a layer of slices in a buttered baking dish.
2. Sprinkle this layer with each of the following seasonings:
 - Sugar
 - Salt
 - Onion juice
 - Melted butter (or bits of butter)
3. Add a thin layer of one of the following starchy (thickening) materials:
 - Cracker crumbs, coarse (generally used)
 - Bread crumbs, coarse
 - Flour paste (such as macaroni)
 - Rice or hominy
4. Repeat putting in layers of tomatoes, seasonings, and starchy material.
5. Cover mixture with buttered crumbs and bake 15–20 min., or until tomatoes are tender and the top surface is brown.

Notes:

1. Certain fats, such as corn oil, may be substituted for butter.
2. Why not use milk in this recipe?
3. Tomatoes are the only acid vegetable commonly eaten.

BEVERAGES

Cambric Tea

Ingredients:

1 tb.	1/2 c. milk or cream, scalded
3 tb.	1-1 1/2 c. boiling water
dash	Sugar to taste

Method:

Mix all the ingredients, and serve at once.

Cinnamon Tea

(A derivative of cambric tea)

Ingredients:

2 tb.	1 c. milk, scalded
2 tb.	1 c. boiling water
dash	0-1 1/2 t. sugar
dash	Cinnamon

Method:

Pour a mixture of the first three ingredients into a hot cup, and sprinkle it with cinnamon.

Cereal Coffee (Cooked)

Ingredients:

1/2 c.	1 c. boiling water
1 tb.	2 tb. cereal coffee (average quantity used)
spk.	Dash of salt

Method:

1. Tie cereal coffee in a double or triple thickness of cheesecloth, place this bag in a coffee pot, add water, simmer 20 min., then remove bag.

2. Serve beverage with sugar and a choice of the following:

- Rich cream
- Evaporated milk
- Scalded milk (on the order of café au lait)

Notes:

1. Dispense with the bag and use a percolator, if preferred.
2. A beverage is sometimes made by boiling carrots (parched, then powdered) in water. Vanilla is a good addition.

Crust Coffee**Ingredients:**

$\frac{1}{3}$ c.	3-4 c. boiling water
2 t.	$\frac{1}{3}$ - $\frac{1}{2}$ c. hot milk or cream
dash	Salt
1 tb.	1 c. bread crumbs (see note)

Method:

1. Add the crumbs to the boiling water, simmer 5-15 min., then strain.
2. Add milk or cream and salt, and serve; a little sugar is sometimes relished.

Note:

Secure the crumbs in the following way:

- a. Toast any one of the following breads until it is very crisp and a golden brown (do not burn it):
 - Boston brown
 - Graham
 - White
 - Whole wheat
- b. Roll bread into fine crumbs by means of a rolling pin.

Apple Water**Ingredients:**

$\frac{1}{4}$ apple	2 large sour apples
$\frac{1}{2}$ t.	1-2 tb. sugar
$\frac{1}{4}$ c.	2 c. boiling water

Method:

1. Wipe and core apples.
2. Fill the cavities with sugar, and bake apples until they are tender.
3. Mash, add water, and let mixture stand in a cool place 1-2 hr.
4. Strain, and serve cold as a beverage, with sugar and lemon juice to taste.

Notes:

1. Apple water is sometimes prepared by pouring boiling water over fresh or dried apples which have been ground in a meat-grinder; let mixture stand 1-2 hr., strain, and serve as above. A red apple, unpared, is desirable from the standpoint of color.

2. If desired, heat the strained apple water and serve it hot.

Cocoa-Shell Tea**Ingredients:**

$\frac{1}{2}$ c.	4 c. boiling water
1 tb.	$\frac{1}{2}$ -1 c. cocoa shells

Method:

1. Add the shells to the water, cover, and boil 5 min.

2. Strain, and serve with any of the following, as desired:

Cream, scalding hot
Milk, scalding hot
Sugar

Note:

It is often an economy to save the shells so as to prepare a second quantity of tea from them. The average price of shells is 12 cents per pound.

Cocoa

Ingredients:

$\frac{1}{2}$ t.	$1\frac{3}{4}$ tb. sugar (or to taste)
$\frac{1}{2}$ t.	2 tb. cocoa
1 tb.	$\frac{1}{2}$ c. cold water
4 tb.	2 c. whole milk, scalded in a double boiler
dash	$\frac{1}{16}$ t. salt

Method:

1. Stir a mixture of the first three ingredients over a low flame 3-5 min., or until the paste is so thick that the spoon leaves a track.

2. Add hot milk to the paste, stirring constantly; add the milk gradually, else specks of chocolate are likely to form.

3. Heat the beverage to the scalding point (there is no necessity for boiling it).

4. Add the salt, then, keeping the beverage over a low flame, form a heavy froth on top by beating the beverage with a Dover or turbine beater (the froth prevents formation of a scum of protein material). Serve the cocoa at once.

Notes:

1. Chocolate is so rich in fat that it is seldom adaptable to children's diet. Note the following recipe (made by the same method as for cocoa):

$\frac{1}{2}$ t.	2 tb. sugar (or to taste)
$\frac{1}{2}$ t.	1 square of bitter chocolate, shaved thin or grated
2 tb.	$\frac{3}{4}$ c. water
3 tb.	$2\frac{1}{4}$ c. whole milk, scalded in a double boiler
dash	$\frac{1}{16}$ t. salt

2. Dr. Goldthwaite¹ notes the high protein value of cocoa and chocolate made with skim milk. Since protein is one of the essentials for growth in children, certain of Dr. Goldthwaite's recipes are quoted as follows:

COCOA	COCOA	CHOCOLATE
$2\frac{3}{4}$ tb. sugar	$2\frac{3}{4}$ tb. sugar	$2\frac{3}{4}$ tb. sugar
5 tb. cocoa	$3\frac{1}{2}$ tb. cocoa	2 squares of bitter chocolate
1 c. cold water	1 c. cold water	1 c. cold water
3 c. skim milk	3 c. skim milk	3 c. skim milk
4 t. cream	4 tb. cream	4 tb. cream

¹Nellie E. Goldthwaite, "Chocolate and Cocoa," *University of Illinois Bulletin No. 43*.

3. The brand and individual taste make a difference in the quantity of cocoa or chocolate used in the recipes.

4. Are the following correct reasons for boiling cocoa or chocolate paste so thoroughly? (Note that both cocoa and chocolate are rich in starch.)

a. Uncooked cocoa or chocolate is not soluble in water, hence it sinks to the bottom of the cup.

b. Flavor of beverage is improved.

c. Digestibility of beverage is increased.

In making either beverage, why avoid cooking the milk for as long a time as the paste? In the cooking of cocoa or chocolate paste (see step 1), a white scum forms; remove scum and test it with iodine (for starch), also with nitric acid (for protein).

5. For variations for use in adults' diet chiefly, see Appendix G, page 215, Note 2.

BEVERAGES ALLOWED CHILDREN: A SYNOPSIS¹

*Buttermilk (fresh)

*Cambric tea

Cereal coffees:

Commercial cereal coffees

Homemade cereal coffees (such as barley or rye)

*Cocoa and chocolate (see Notes 1 and 3)

Cocoa-shell tea

Crust coffee (from browned crusts of bread)

Fruit juice, from raw or cooked fruit (juice pure* or made into "ades")

*Malted milk

*Malted nuts

*Milk

Water (in abundance)

Notes:

1. *Food beverages*: An asterisk as used in the foregoing list denotes a food beverage. Such a beverage is permitted in a menu only when due allowance is made for its high food value; for example, note that malted milk should be the main part of a meal, not a supplementary part. Milk may be used in abundance as a beverage if it is borne in mind that milk is a real food and that it should be sipped.

Cocoa and chocolate are hearty foods (pupil to state the percentage of protein, fat, and starch in these beverages). Chocolate disagrees with many stomachs because it is rich in fat; cocoa is usually safer on account of its low fat content. "For school children a warm liquid is desirable at noon. This may be soup or cocoa. Chocolate is too rich. The fact that fats remain longer in the stomach than other substances makes it particularly undesirable to serve fatty foods at noon if the child is to return soon to work."²

Cambric tea is one of the best beverages for children. It warms, stimulates, and yet leaves no harmful effects.

¹The suggestions given in this synopsis are also safe rules for the guidance of many adults, especially invalids.

²Caroline L. Hunt, "The Daily Meals of School Children," *Bulletin*, 1909, No. 3, U.S. Bureau of Education.

2. *Beverages of little or no food value:* Cocoa shells, or the outside of cocoa beans, make a beverage of very little food value.

Cereal coffees are of little or no food value except for the cream and sugar added; any possible value in the beverages lies in the fact that they are hot and that they are not injurious to the nerves. Either roasted or unroasted kernels of barley and rye may be purchased; it is a very simple process to roast the raw kernels at home. Pupil to secure the names of various brands of each of the following types of commercial cereal coffees:

a. Cereal coffees which require cooking

b. Instant forms of cereal coffees (These are by far the more convenient; place $\frac{1}{2}$ -1 t. in a cup, add boiling water almost to fill the cup, and serve with sugar and cream.)

Only those fruit juices which contain very little acid should be used in beverages for children; lemonade, as a rule, should be avoided. Very acid beverages are not advisable for children or adults. Grape juice and lemonade, if used to any extent, should be in a diluted form. The former has a great tendency to ferment in some stomachs. (Note the use of fruit soups in children's and adults' diet.)

3. Stimulating beverages, such as the following, are forbidden children:

Beer and other alcoholic drinks

Coffee and tea

Neither tea nor coffee is a food. Both take away appetite for food and hinder growth.

Both cocoa and chocolate are objectionable for very young or nervous children because of their stimulating element, theobromine. Children over six may drink weak cocoa or cocoa-shell tea occasionally, making the beverage with milk. Never allow the child to have cocoa or chocolate except when these are made with a large proportion of milk and a very small quantity of cocoa or chocolate.

The Kellogg Food Company manufactures Health Koko, a powder (for use in making a beverage) consisting chiefly of cocoa from which the theobromine has been extracted. The same company uses in its candies a chocolate from which the theobromine has been extracted.

4. Young children should beware of soda-fountains. Pupil to ascertain (a) whether carbonated beverages and Coco Cola are injurious; (b) whether they have any advantages.

DESSERTS MADE ON A MILK BASIS

Junket, or Jellyed Milk

Ingredients:

$\frac{1}{4}$ c.	1 qt. fresh whole milk (raw or Pasteurized)
$\frac{1}{16}$ - $\frac{1}{8}$ tablet	1 junket tablet (such as Hansen's)
$\frac{1}{4}$ t.	1 tb. cold water
$\frac{3}{4}$ t.	2-8 tb. sugar
4 d.	1-2 t. vanilla, or to taste
spk.	Dash of salt

Method:

1. Heat the milk in a double boiler to lukewarm, or blood, temperature (98.6° F., or 37° C.); if a thermometer is not available, use the wrist test for blood heat. Avoid a temperature over 98°-100° F., else the tablet solution to be added in step 4 will not act easily, if at all.

2. Dissolve the sugar in the milk.

3. Dissolve the tablet in the cold water.

4. Mix all the ingredients in recipe and stir well for a few seconds only.

5. Pour mixture at once into sherbet or other pretty glasses in which the junket is to be served, and place them in a warm, but not a hot, place.

6. Without moving or stirring the junket during the setting process, let it stand $\frac{1}{2}$ hr., or until firm.

7. Chill junket as soon as it is firm.

8. Serve the dessert as soon as possible (it has a tendency to curdle if allowed to stand for any length of time). Sprinkle junket with cinnamon or nutmeg and powdered or granulated sugar. Serve it with cream or soft custard; the cream may be whipped, if preferred, then sweetened and flavored.

Notes:

1. The dessert is tough if more than 1 tablet is used to 1 qt. milk. Note the following points with regard to the class recipe:

Advantage of using $\frac{1}{16}$ tablet: A more delicate, or tender, junket results.

Advantage of using $\frac{1}{8}$ tablet: Time for setting is greatly reduced (recipe sets in 10-15 min.).

Junket tablets are sold for 10-15 cents per bottle at most drug stores. 4 t. rennet (a liquid) may be substituted for 1 junket tablet in the large recipe.

2. Note types of milk which cannot be used in making junket:

Condensed milk (sweetened or unsweetened)

Malted milk

Milk diluted to any extent with water

Milk containing preservatives

Junket can be made from boiled (sterilized) milk only when the boiled milk is treated as follows:

- a. Cool it to blood heat.
- b. Add twice as much junket as is used in the foregoing recipe.
3. Beaten raw egg is a possible addition to junket.
4. Note possible flavorings for junket:
 - Caramel sirup (substitute 1 tb. cold sirup for 1 tb. sugar)
 - Coffee
 - Fruit juice (such as orange)
 - Vanilla or other extract
 - Vanilla and cocoa (Mix 3-4 tb. cocoa with a little water and stir over the fire to make a very thick paste. Add 1 qt. milk to the paste, then blend with vanilla and a dissolved junket tablet.)

Cocoa is stimulating to the nerves, hence it is to be avoided in the feeding of young children. Coffee is so stimulating that it should be avoided with children of all ages.

5. Delicate pink or other coloring paste may be added to junket. Possible garnishes include the following, most of which, if used with moderation, are allowable for children:

Cake crumbs (such as sponge cake)

Coconut, freshly shredded

Meringue (poached or not before being heaped on junket)

Nuts, chopped

Fruit:

Candied (cherries, etc.)

Jam (such as strawberry)

Jelly, bright-colored

Juice

Chopped (pineapple, etc.)

Sliced (such as bananas or oranges)

Whole (raspberries, strawberries, loganberries, etc.)

6. It is often well to hasten the setting process by placing the molds in a pan of warm water (temperature of water not to exceed 98°-100° F.).

7. Advantages of junket as a dessert are as follows:

Inexpensive, simple, and easily prepared

Dainty and nutritious

Easily digested (and so especially wholesome for those of weak digestion, such as children and invalids)

Useful as a method for giving milk to children and invalids

8. A smooth, rich ice cream can be made with but a small quantity of cream if junket is used as the basis of the ice cream.

SEA-MOSS DESSERTS

Irish-Moss Mold

Ingredients:

(4 servings)

1 t.	2½ tb. dry Irish moss (measured after sand and soiled particles have been removed and moss has been clipped with shears into pieces almost as fine as bran)
¼ c.	2 c. milk, scalding hot
½ t.	2 tb. sugar
dash	⅛ t. salt
6 d.	¾ t. vanilla

Method:

1. Cover clipped moss with cold water and let it stand 15 min.
2. Drain, and pick it over carefully.
3. Add moss to milk, and, stirring occasionally, cook mixture in a double boiler 30 min., or until a few drops thicken quickly on a cold plate. (Cook the class recipe 15-20 min. in a double boiler.)
4. Strain the mixture through a fine sieve, pressing little, if any, of the solid moss through the sieve.
5. Add sugar, salt, and vanilla, and pour mixture into molds wet with cold water.
6. Chill 30-40 min., or until mixture sets, turn out, surround with fruit (such as slices of banana or orange), and serve as a dessert with cream and sugar.

Notes:

1. A chocolate mold is derived as follows from the recipe:
 - a. Mix the following ingredients and stir over a low direct flame until the mixture is as thick as a drop batter:

1 t.	¾ square of bitter chocolate, grated
¾ t.	2 tb. sugar
2 t.	3 tb. cold water
 - b. Slowly beat the pudding (flavored, strained, and still hot) into this chocolate paste.
 - c. Add ¾ t. extra vanilla (1½ t. total).
 2. Other possible additions, include:
 - Chopped nuts, figs, etc.
 - Pink, or other tint
 - Eggs, beaten or unbeaten (add whole eggs, yolks alone, or whites only)
 3. Any of the following may be substituted for part or all of the milk:
 - Fruit juice
 - Jelly or jam (diluted with water)
 - Thin cream
 - Water (If water is the only liquid, Irish-moss jelly results; simmer moss in water until almost all dissolved. Lemon juice is a good flavoring.)
 4. Milk jelly is prepared by omitting all but milk and moss from the given recipe. If milk jelly is served hot and liquid, instead of cold, it is called gruel.
 5. A pretty Easter dish is made by filling an egg shell as follows:
 - a. Remove a tiny bit of shell from one end of egg and pour out the contents.
 - b. Rinse shell with water and pour in a stiff Irish-moss-mold mixture.
 - c. Set shell upright (for example, in corn meal) until filling is hard, then remove shell.
 - d. Surround with lady fingers and serve with whipped cream.
- A gelatin or a cornstarch mixture may be substituted for the moss mixture in filling the shell.
6. The exact time for cooking moss in any liquid cannot be given. (May this fact be due to a varying quantity of gelatinous substance in the moss?) A period of 15-30 min.

is usually long enough. If the moss is cooked too long in the liquid, the pudding is tough and strong in flavor.

7. Irish moss, as a rule, can be secured inexpensively from any druggist. It is a very mucilaginous seaweed and is used for thickening liquids. Compare it with the commercial product, "vegetable gelatin."

8. Powdered sea-moss (sold in some markets) is simpler to use than moss not in the powdered form. What are the comparative cost and the flavor? Powdered sea-moss is one of the most effective stiffening agents used in cooking. Note the typical recipe below.

Sea-Moss Mold, Prepared from Powdered Moss

Ingredients:

(4 servings)

¼ t.	½ tb. powdered sea-moss (Sea-Moss Farine)
1 t.	3 tb. sugar
¼ c.	2 c. milk, scalded
6 d.	½ t. vanilla

Method:

1. Mix the moss and sugar.
2. Stirring constantly, add them to hot milk and stir them in a double boiler until mixture is as thick as thin cream.
3. Cover, and steam 30 min. longer, stirring being unnecessary.
4. Pour mixture into four molds wet with cold water, and chill.
5. Turn out, and serve with cream and sugar or soft custard. (Do not turn mixture from molds until just before serving, as the molded portions crack easily.)

Note:

The mixture after 30 min. steaming is no thicker than thin cream, yet it molds perfectly.

CORNSTARCH DESSERTS

Plain Cornstarch Mold (White)

Ingredients:

(6-8 servings)

2 t.	6 tb. cornstarch	
2 t.	5 tb. sugar	
dash	¼ t. salt	
1 tb.	½ c. cold milk	} fresh or condensed
¼ c.	3½ c. scalded milk	
6 d.	1 t. vanilla	

Method:

1. Mix the dry ingredients thoroughly.
2. Add the cold milk and stir to make a smooth paste.
3. Add paste to the scalded milk, stirring meanwhile.
4. Stir mixture in a double boiler until it is as thick as heavy cream, then cover and cook 20 min. longer so as to remove the raw starchy taste and odor. Stir once or twice during the 20-min. period.

5. Cool a little, and add vanilla.
6. Pour mixture into molds wet with cold water, and chill 5-6 hr. or longer.
If a refrigerator is not available, set the molds in cold water.
7. Turn out and serve with one of the following:
 - Cream and sugar
 - Soft custard
 - Hot fruit juice or sauce (such as grape)
 - Hot chocolate sauce
 (Serve cornstarch hot, if preferred.)

Notes:

1. The recipe allows of considerable variation according to taste; for example:
 - Use 4-8 tb. cornstarch (6 tb. cornstarch yield a semi-stiff mold; 8 tb. a stiff mold. The pudding will jelly, but will not turn from mold as a rule, if less than 6 tb. cornstarch are used.)
 - Use 4-6 tb. sugar (white or brown).
 - Steam 20-45 min. (Time of cooking affects thickness of pudding. Explain.)
2. Note simple derivatives:
 - a. Chocolate mold, made by the addition of chocolate (see recipe, page 100)
 - b. Caramel mold, made by substituting caramel for part or all of the sugar
 - c. Molds made by the substitution of any of the following for part or all of milk:

Thin cream	Jelly or jam, diluted with water
Fruit juice	Strong coffee (for adults only)

 Fruit-juice molds are an excellent way of supplying fruit juices to children.
A cornstarch mold is attractive in layers, such as white, chocolate, and pink.
3. If more nutritious desserts are desired, add 1-4 yolks of eggs or 1-4 whites to any of the following:
 - Plain mold, page 98
 - Chocolate mold, page 100
 - Caramel or fruit-juice mold
 A cornstarch meringue results if the yolks and whites are beaten separately.
Any of the following ingredients may be stirred into a cornstarch pudding just before it is molded, or, if preferred, the cornstarch mixture and the additions may be placed in the mold in alternate layers (beware of rich combinations for children):
 - Marshmallows, cut in quarters
 - Nuts, chopped
 - Raw or cooked fruits:
 - Fresh (such as berries)
 - Dried (dates, figs, etc.)
4. Use the following method with the class recipes for this pudding and the chocolate mold which follows:
 - a. Perform steps 1 and 2 of the method, page 98.
 - b. Add any hot milk called for, and stir the mixture in a double boiler until it is as thick as a drop batter.
 - c. Remove spoon, cover boiler, cook mixture 5 min. (not 20 min.), flavor, then place it in a mold.

Chocolate Cornstarch Mold*(6-8 servings)***Ingredients:**

2 t.	6 tb. cornstarch
2 t.	$\frac{1}{2}$ c. sugar
dash	$\frac{1}{4}$ t. salt
1 t.	$1\frac{1}{2}$ squares of bitter chocolate, grated
1 tb.	$1\frac{1}{2}$ c. cold milk
$\frac{1}{4}$ c.	$2\frac{1}{2}$ c. cold milk
8 d.	$1\frac{1}{2}$ t. vanilla

} fresh or condensed

Method:

1. Mix the chocolate with the other dry ingredients.
2. Add $1\frac{1}{2}$ c. cold milk, mix well, then stir mixture in a double boiler until it is as smooth and thick as a soft dough.
3. Stirring constantly, slowly add the remaining portion of cold milk.
4. Stir mixture 2-3 min. in a double boiler; then cover and cook it 20 min. longer, stirring occasionally.
5. Cool, flavor, and pour mixture into molds wet with cold water

Notes:

1. This recipe allows of considerable variation according to taste; for example:

Use 4-8 tb. cornstarch. (4 tb. yield a nicely jellied pudding, but not quite stiff enough to mold; 6 tb. yield a semi-stiff mold; 8 tb. a stiff mold.)

Use $\frac{1}{4}$ - $\frac{3}{8}$ c. sugar.

Use 1-2 squares of chocolate.

Use 1-2 t. vanilla, almond, or other extract.

Add a small quantity of beaten egg.

The chocolate mold, because of the use of bitter chocolate, requires for the average taste more sugar and extract than the plain mold, page 98.

2. Cocoa (6 tb.) may be substituted for $1\frac{1}{2}$ squares of chocolate in the given recipe. (Use 1 t. cocoa in the class recipe.) Mix the cocoa with the other dry ingredients and proceed with the method for plain mold, page 98.

3. Suggest other methods for blending both chocolate and plain cornstarch molds.

RICE DESSERTS**Rice Pudding Containing Eggs****Ingredients:**

2 tb.	2 c. milk, scalded
1 tb.	2 c. boiled or steamed rice (such as left-over rice)
dash	$\frac{1}{8}$ t. salt
1 t.	4-5 tb. sugar
1 t.	2 eggs, beaten light
$\frac{1}{4}$ t.	2-3 tb. butter, melted
dash	1 t. grated rind of lemon (or a substitute flavoring)
1 t.	$\frac{1}{3}$ - $\frac{1}{2}$ c. fruit, used singly or in any combination, such as:
	Apples Pineapple
	Currants Raisins

Method:

1. Mix all the ingredients except the eggs.
2. Slowly add this mixture to the eggs, place entire mixture in a baking dish, and sprinkle it with cinnamon or nutmeg.
3. Place the baking dish in a pan of hot water, and bake in a moderate oven 20-30 min., or until pudding is firm.
4. Serve with cream and sugar.

Notes:

1. This pudding is simply a baked custard containing rice and fruit.
2. The pudding is attractive spread with meringue after being baked; brown the meringue.
3. A quick pudding is made by stirring the entire mixture in a double boiler 15 min., or until it is creamy; then bake to brown the top.
4. Pearl barley or hominy may be substituted for rice. The pudding is sometimes prepared with flaked rice.
5. Dried or condensed milk or dried egg may be used.

Rice Pudding without Eggs**Ingredients:**

- 4 c. milk, whole or skim
- $\frac{1}{4}$ - $\frac{1}{3}$ c. raw rice
- $\frac{1}{2}$ t. salt
- 3-4 tb. sugar
- $\frac{1}{3}$ c. raisins or currants

Method:

1. Wash rice and fruit.
2. Mix all the ingredients, and pour them into a buttered baking dish.
3. Bake mixture 2-4 hr. in a very slow oven, stirring often during the first part of baking so as to prevent the rice from settling; in the end the top should be a pretty brown.
4. Serve hot or cold with cream.

Notes:

1. If desired, add one of the following flavorings:
 - Grated rind of $\frac{1}{2}$ lemon
 - $\frac{1}{8}$ t. ground mace or nutmeg
 - $\frac{1}{8}$ t. ground cinnamon
2. Why is it not well to add egg to this pudding?
3. If preferred, cook the pudding $1\frac{1}{2}$ -2 hr. in a double boiler, then brown it in oven.

SUGGESTIONS FOR CHILDREN'S PARTIES

SANDWICHES

Sandwiches should be simple, but attractive and served in abundance. Aim to satisfy the child's hunger with sandwiches so that later he will not overeat of ice cream and cake. (Consult Note 1, page 122.)

The following recipes for sandwiches offer unusual opportunity for good handwork on the part of the pupil.

Roll Sandwiches

Method:

1. Slice white or graham bread (24 hr. old) *very* thin, then trim off the crusts.
2. Spread slices with butter and a little of any of the following fillings:
Nut butter (such as peanut or almond)
Fruit butter or paste (such as date or fig; see page 144)
Marmalades (such as orange-rhubarb)
Jams and jellies
3. Roll each slice on the order of a jelly roll.
4. Wrap each sandwich in white tissue paper, twisting the ends of paper or tying them with narrow ribbon.

Note:

Sandwiches not rolled are good prepared from thin slices of bread and any of the fillings listed.

Kindergarten Sandwiches

Method:

1. Cut brown and white bread in thin slices.
2. Cut the slices into any of the following forms by means of various cutters:

Animals	Rounds (plain or fluted)
Flowers	Rectangles
Diamonds	Squares
Hearts	Etc.
3. Match together a form of brown bread with one of white bread.
4. Add creamed butter to one slice, then press the two slices into a sandwich.

Notes:

1. It is wasteful, but easier, to spread the slices of bread with butter before they are cut into the various forms.
2. A simple filling, such as jelly or peanut butter, may be added to the sandwiches.

3. Stencil sandwiches result if, before kindergarten sandwiches are made up, a small fancy cutter is used to remove the center from each top slice; $\frac{1}{4}$ " slices of bread are desirable.

Ribbon Sandwiches

Method:

1. Butter two thin slices each of dark brown, white, and graham bread.
2. Pile the six slices together in alternate colors of one slice each.
3. Wrap them in a damp cloth and place them under a weight for 1-2 hr.
4. Slice in narrow strips, and serve strips overlapping one another on a plate.

Notes:

1. A filling of any kind may be placed between the layers, if desired.
2. A harlequin sandwich consists of one or two slices each of dark brown (or graham) and white bread, with or without the addition of a filling.
3. For a variation for use in adults' diet, see Appendix G, page 216, Note 3.

Mosaic Sandwiches

Method:

1. Cut an equal number of $\frac{1}{2}$ " slices of white and graham bread, and butter one side of each slice.
2. Place the bread in piles of six slices each, alternating the graham and white slices and having the buttered sides up except in the case of the top slice of each pile.
3. Place a light weight on top of each pile, and let stand in a cool place until the butter has hardened.
4. Trim each pile even, then cut it in three $\frac{1}{2}$ " slices. Spread these slices with butter and put them together in such a way that a white block alternates with a graham one.
5. Add a light weight, again let piles stand in a cool place until the butter is hard, then cut in thin slices, and arrange on a plate covered with a doily.

Log-Cabin Cheese Sandwiches

Method:

1. Whip together until very light cream cheese and enough whipped cream or French dressing to moisten it.
2. Spread $\frac{1}{4}$ " slices of graham bread with the mixture, and sprinkle them with chopped pecan meats.
3. Press the slices together in pairs, remove crusts, and cut in finger-shaped pieces.
4. Toast, and pile log-cabin style on a plate.

Note:

Salt, paprika, and lettuce are often desirable additions to these sandwiches.

FRUIT SALADS

Peas in a Pod

Method:

1. Split a banana lengthwise in two almost equal sections.
2. Remove the edible part of the banana from both sections.
3. Fill one skin with rows of small balls cut by means of a French vegetable-cutter from any of the following raw fruits (used singly or in any combination):

Apples	Peaches	Plums
Bananas	Pears	Watermelon
Muskmelon	Pineapple	Etc.

Cherries or white grapes may also be used.

4. Sprinkle the balls with lemon juice and powdered sugar. (French dressing made with lemon juice is also a possibility.)
5. Place the other skin on top as a lid.

Notes:

1. If preferred, leave a strip of the banana pulp in the under skin, and place the balls on top of it.
2. In like manner a cucumber shell may be stuffed with little balls of beets, potatoes, etc., and French or other dressing be added. Curled celery and strips or bits of pimento make excellent garnishes (for use in adults' diet chiefly).

Fruit Salad in a Jelly Mold

Method:

1. Chill in a deep bowl a simple lemon jelly made from the following:
 - 2 tb. granulated gelatin
 - $\frac{1}{4}$ c. cold water
 - 2 c. boiling water
 - $\frac{1}{4}$ c. lemon juice
 - $\frac{1}{4}$ c. sugar
2. When mixture is firm, form a cup by scooping out the center of the jelly, leaving the walls of the cup one inch thick.
3. Fill cup with a mixture of the following (all fruits to be sliced):

Apples, tart	Bananas
Oranges	Mayonnaise, slightly sweetened
4. Cover fruit with liquid jelly (secured by melting the gelatin scooped from the center), and chill.
5. When this cover layer of gelatin is firm, turn mold into a shallow bowl containing head lettuce, and garnish with mayonnaise.

Grape Salad

Method:

1. Wash Tokay or Malaga grapes.
2. Remove the seeds, after splitting each grape just enough so that the seeds can be removed.
3. Stuff the grapes with nuts, chopped or whole, to which mayonnaise has been added; pecans or almonds are especially good.
4. Serve on lettuce, and garnish with mayonnaise, French, or cooked dressing.

Notes:

1. It is sometimes desirable to skin the grapes.
2. Large cherries may be substituted for grapes. Stone, and insert in each cherry a round nut, such as a blanched filbert or hazel nut.

DESSERTS

CHARLOTTES

General Notes on Charlottes

I. Definition:

A charlotte is a dessert consisting of a mold with a cream filling. Charlottes are of two types, according to the kind of mold used:

1. Charlotte russe: This is a charlotte in which cake, selected from the following list, is used as the mold (sliced cake and lady fingers are generally used):

Cake, in slices (sponge or angel)	Macaroons
Cake, whole	Meringues
Lady fingers	Wafers

2. Fruit charlotte: This is a charlotte in which fruit, selected from the following list, is used as the mold:

Dried (such as chopped dates or figs)

Fresh, raw (sugar usually added):

Apricots, cut in small cubes	Peaches, cut in small cubes
Bananas, sliced	Raspberries
Orange sections, or carpels	Strawberries

Glacéed or candied

Preserved

The term fruit charlotte is also sometimes applied to a charlotte russe the cream *filling* of which contains stewed fruit or any of the foregoing fruits (see apple charlotte russe, page 108).

II. Cases in which to prepare the molds:

1. Small, or individual, cases:
 - Paper cases, plain or fancy (much used by bakers)
 - Glass molds (such as sherbet glasses)
2. Large cases:
 - Paper cases
 - Glass molds

III. Cake or fruit molds:

Use any one of the following methods in preparing cake or fruit molds:

1. Line a case (paper or glass) with cake or fruit, or a combination of the two.
2. Mold a filling in a case (paper or glass), turn filling out, and then cover the bottom and sides with cake or fruit, or a combination of the two.
3. Scoop out the center of a large or small cake (sponge or other) and use the cake as a mold. (No paper or glass case is used.)

A quick dessert of the same food value as a charlotte is made by pouring a charlotte filling over slices of cake. It cannot be called a charlotte, however, since no mold is used.

IV. Fillings:

Whipped cream is the basis for all fillings. The only difficulty in the making of a filling consists in the addition of the whipped cream at just the right instant. If the gelatin mixture is too liquid, the whipped cream loses its lightness and the filling separates into layers; if the gelatin mixture is too hard, a lumpy filling results.

Any charlotte filling may be molded in white, pink, chocolate, or other layers by dividing it into two or more parts and coloring it while it is in the liquid state.

Types of fillings are as follows:

1. Fillings not stiff enough to turn from mold; note three varieties:
 - Whipped cream, flavored and sweetened with powdered sugar
 - Whipped cream (flavored and sweetened) containing a little gelatin
 - Whipped cream containing a small quantity of chilled honey
2. Fillings so stiff with gelatin that they will mold; note varieties (*a* and *b* are generally used):
 - a.* Simple whipped cream mixed with gelatin
 - b.* Rich milk or plain cream mixed with gelatin and enriched by the folding in of whipped cream just as the mixture begins to set
 - c.* Any liquid (milk, cream, water, or fruit juice) mixed with gelatin and enriched by the whipping in of the beaten whites of eggs (see *Diet for Adults*, pages 198-200, for notes on "sponges")

Some of these gelatin fillings are simply Bavarian creams. See *Diet for Adults*, page 201, Note 5.

Fillings may be flavored with any of the following:

Caramel	Coffee (for adults only)
Chocolate, melted or powdered (also see page 108, Note 2)	Flavoring extract (such as vanilla)
Cocoa, dry	Fruit juice or pulp (apple, orange, strawberry, etc.)

Possible additions to fillings include:

Whites of eggs beaten stiff (sometimes substituted for part or all of the whipped cream of *a* and *b*)

Yolks of eggs (these add greatly to nutritive value)

Solid foods; any of the following may be folded into a filling before it is placed in a mold, or may be used as part of the mold itself:

Cake crumbs, toasted (such as sponge cake)

Fruits (see I, page 106)

Macaroons, crushed

Nuts (such as browned almonds)

Rice, cooked (see rice Bavarian cream, page 113)

V. Garnishes:

Garnishes, including the following, are especially desirable in charlottes that are turned from the molds:

Angelica	Fruit, fresh (berries, etc.)
Chocolate, melted and cooled	Fruit, glacé
Cream, whipped (put through a pastry tube)	Jam or jelly
Fruit, candied (cherries, etc.)	Lady fingers (iced, if desired)

Charlotte Russe*(Standard recipe)**(4 sherbet glasses)***Ingredients:**

$\frac{1}{2}$ t.	1 tb. granulated gelatin
1 t.	2 tb. cold water
$1\frac{1}{8}$ tb.	$\frac{1}{2}$ c. thin cream, scalded in a double boiler
$\frac{1}{2}$ tb.	3 tb. powdered sugar
4 d.	1 t. vanilla (or other extract, such as almond)
$1-2\frac{3}{8}$ tb.	1 c. rich cream, measured after being whipped stiff
1 lady finger	8 lady fingers or slices of sponge or angel cake

Method:

1. Soak the gelatin 3-5 min. in cold water.
2. Add it to the hot cream, stir mixture in a double boiler until the gelatin is dissolved, then strain mixture into a bowl.
3. Add sugar and vanilla, set bowl in ice water, and stir mixture almost constantly until it begins to thicken.
4. Fold in the whipped cream, and while the mixture is still in a condition to pour, turn it into molds lined with lady fingers or with cake.
5. Chill dessert, and turn from mold.

Notes:

1. Make the dessert in one large mold, if preferred.
2. Chocolate charlotte, made as follows, contains the ingredients used in the foregoing recipe together with 2-3 tb. grated bitter chocolate:
 - a. Soak the gelatin 3-5 min. in cold water.
 - b. Cook the chocolate to a smooth paste with half of the hot cream.
 - c. Add this paste to the remainder of hot cream and cook mixture 10 min. in a double boiler.
 - d. Add soaked gelatin to the hot liquid, stir mixture in a double boiler until gelatin is dissolved, then strain into a bowl.
 - e. Perform steps 3, 4, and 5 of the foregoing method.

Apple Charlotte Russe*(Not very rich)**(4 servings)***Ingredients:**

$\frac{1}{2}$ t.	$1\frac{1}{2}$ tb. granulated gelatin
$\frac{1}{2}$ tb.	$\frac{1}{4}$ c. cold water
2 tb.	1 c. smooth, strained apple sauce (well sweetened), boiling hot
2 tb.	1 c. rich cream, measured after being whipped stiff
1 lady finger	6 lady fingers

Method:

1. Soak gelatin $\frac{1}{2}$ hr. in cold water, then dissolve it in the hot apple sauce.
2. Fold in the cream as soon as the mixture begins to thicken.
3. Line a mold with lady fingers, pour in the mixture, and chill.

SHERBETS

Introductory Notes

1. Sherbets are an excellent means of furnishing the following to children (and adults):

Milk (see milk sherbet)
Egg whites
Fruits

2. A sherbet can be derived from any water ice by either of the following methods:

- a. Substitution of milk for water

- b. Addition of one of the following:

Whites of eggs (beaten stiff)

Gelatin (soaked, and then dissolved in boiling-hot sirup)

Boiled frosting

Whipped cream

Two or more ingredients, such as gelatin and egg white, are sometimes added.

(Pupil to make a collection of recipes containing two or more of these added ingredients.)

The use of either method results in a smooth, or *soft*, product, and usually in a white product.

3. The recipes given are illustrative of the above methods for making sherbets.

Flavor is a matter of choice, hence, by the use of the following fruits singly or in any combination, numerous sherbets may be derived from each of the recipes printed:

Apricots

Bananas

Cherries

Cranberries (juice of
cooked berries)

Grapes (juice)

Lemons

Mint (steeped in water)

Oranges

Peaches

Pineapple

Raspberries

Strawberries

Tangerines

Use fruit (canned or fresh) in any of the following forms:

Juice alone

Pulp (grate or mash the fruit)

Small pieces of fruit (add these when the sherbet mixture is nearly frozen)

Jelly or jam is sometimes substituted for the foregoing juice, etc.

The texture of both ices and sherbets is smoother if, before the fruit is added, a sirup is made by cooking together the sugar and part or all of the liquid.

4. Any sherbet recipe allows of great variation, according to choice, in the kinds and proportions of all ingredients. The recipes given are simply representative ones.

5. Serve sherbets in sherbet cups (glass) or in tall slender glasses.

6. Note class suggestions:

- a. Pupil to be assigned one of the five sherbet recipes (pages 110-112).

- b. Pupil to bring fruit juice or other flavoring from home, so that a variety of sherbets may be displayed at the end of the lesson.

(Each of the class recipes printed fills or almost fills one sherbet glass.)

Water Ice (Lemon)*(Recipe from which the sherbet recipes are derived)***Ingredients:**

$\frac{1}{4}$ c.	4 c. water
2 tb.	$1\frac{1}{2}$ -2 c. sugar
2 t.	$\frac{3}{4}$ -1 c. lemon juice

Method:

1. Boil sugar and water together to make a thin sirup. (Boil class recipe 3 min.)
2. Add lemon juice, strain, and freeze.

Note:

Various ices may be derived from this recipe by the substitution of other flavorings for lemon juice.

Milk Sherbet (Lemon)*(Made by the substitution of milk for the water of water ice)***Ingredients:**

$\frac{1}{4}$ c.	4 c. milk
2 tb.	$1\frac{1}{2}$ -2 c. sugar
2 t.	$\frac{3}{4}$ -1 c. lemon juice

Method:

1. Dissolve the sugar in the lemon juice.
2. Stirring constantly, very slowly add the milk, then freeze.

Note:

The mixture will probably curdle as the milk is added. This curdiness, however, will disappear during the freezing process.

White-of-Egg Sherbet (Pineapple)*(Water ice + egg whites)***Ingredients:**

$\frac{1}{4}$ c.	4 c. water
1 tb.	$\frac{1}{2}$ c. sugar
1 t.	Juice of 4 lemons
2 t.	1 fresh raw pineapple, shredded
1 tb. beaten stiff	3 whites of eggs, beaten stiff

Method:

1. Make a sirup by boiling sugar and half the water together for 10 min.
2. Add lemon juice, then strain.
3. Add pineapple and remainder of water.
4. Freeze to a mush, add beaten whites, and continue freezing until mixture is stiff.

5. Remove the dasher, pack, and let the mixture stand 2-3 hr. to ripen, or develop flavor.

Note:

In some sherbets meringues are added in place of plain whites of eggs.

Gelatin Sherbet (Orange)

(Water ice + gelatin)

Ingredients:

2 tb.	4 c. water
1 tb.	2 c. sugar
$\frac{1}{2}$ t.	$\frac{1}{4}$ c. lemon juice
dash	Grated rind of 2 oranges
$\frac{1}{8}$ t.	1 tb. granulated gelatin
1 tb.	2 c. orange juice

Method:

1. Soak gelatin 3-5 min. in $\frac{1}{4}$ c. cold water. (Use $\frac{1}{2}$ t. water in class recipe.)
2. Prepare a sirup from the sugar and the remaining water ($3\frac{3}{4}$ c.).
3. Add the soaked gelatin to the sirup.
4. Add the other ingredients except the rind, and strain.
5. Add rind, and freeze.

Boiled-Frosting Sherbet (Grape)

(Water ice + boiled frosting)

Ingredients:

2 tb.	4 c. water
1 tb.	2 c. sugar
$\frac{1}{2}$ t.	Juice of 2 lemons
1 tb.	2 c. grape juice
	Boiled frosting (see notes):
$\frac{1}{2}$ t.	$\frac{1}{4}$ c. sugar sirup at threading stage
2 t. beaten stiff	1 white of egg, beaten stiff

Method:

1. Prepare a sirup from the first two ingredients.
2. Add lemon and grape juice, strain, and freeze.
3. When mixture is frozen, beat in the boiled frosting.

Notes:

1. To make the boiled frosting, add the boiling-hot sirup very slowly to the beaten white of egg, then beat mixture until it is thick.

2. One pupil to prepare enough sirup (from $\frac{1}{4}$ - $\frac{1}{2}$ c. sugar) for use by the entire class in making frosting.

Whipped-Cream Sherbet (Frozen Apricots)*(Water ice + whipped cream)***Ingredients:**

2 tb.	4 c. liquid (a mixture of apricot juice and water)
$\frac{3}{4}$ tb.	$1\frac{1}{2}$ c. sugar
2 tb. pulp	1 qt. canned apricots, pressed through a sieve
1 tb. whipped cream	Whipped cream (obtained by beating 1 pt. triple cream)

Method:

1. Mix the first three ingredients and partially freeze them.
2. Fold in the cream and complete the freezing.

Notes:

1. Possible substitutes for canned apricots include:
Apricots, stewed and sweetened (fresh or dried fruit)
Fruits in general, such as peaches and cranberries (fresh, dried, or canned fruit)
2. Which are the cheapest, fresh, dried, or canned apricots?

MISCELLANEOUS DESSERTS**Baked Alaska****Ingredients:**

$\frac{1}{8}$ qt.	1 qt. brick ice cream
$\frac{1}{4}$ " slice, 2" square	Sponge or angel cake (baked in a shallow pan)
Meringue:	
$\frac{1}{2}$ white	3 large whites of eggs, beaten until stiff and lumpy (or 4 small whites)
$\frac{1}{2}$ tb.	3 tb. powdered sugar
4 d.	$\frac{1}{2}$ t. vanilla (not essential)

Method:

1. Prepare the meringue by beating the three ingredients with a Dover beater until the mixture stands up with stiff finger-like projections. (*Caution:* Use whites of eggs immediately after they are beaten stiff.)
2. Cover one side of a board ($\frac{3}{4}$ " thick) with heavy paper.
3. Set the cake on the board, place ice cream on top of cake, and cover the top and sides of cream with meringue.
4. Brown the top surface by holding the recipe next the flame of the broiling oven. (Do not place it in the baking oven, since the cream is almost sure to melt.)
5. Slip the dessert upon a platter, and slice. (Serve it with hot chocolate sauce, if desired.)

Notes:

1. A brick of water ice may be substituted for the ice cream. (It is more cooling. Why?)

2. Secure a board $3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{3}{4}"$ for each pupil.

3. Correlation with physics: Pupil to study nonconductors of heat in relation to each of the following:

Baked Alaska (baked ice cream)
 Alaska fritters (fried ice cream; see Appendix G, page 216, Note 6)
 Rice Bavarian cream (baked gelatin; see recipe below)
 Fireless cooker
 Refrigerator
 Tea cozy
 Thermos bottle

Pupil to relate the following to the foregoing list:

Nonconductivity of:

Asbestos	Meringue
Cork, ground	Paper
Flour mixtures (such as cake and fritter batters)	Vacuum
Hay	Wood

Conductivity of metals (note that ice cream melts quickly if it is baked on tin)

Rice Bavarian Cream

Ingredients:

(6 servings)

1 tb.	$\frac{1}{2}$ c. boiled or steamed rice (see Note 1)
$\frac{1}{2}$ t.	$1\frac{1}{2}$ tb. sugar
$1\frac{1}{2}$ tb.	$\frac{3}{4}$ c. milk
dash	$\frac{1}{16}$ t. salt (omit if rice has been salted)
2 d.	$\frac{1}{2}$ t. extract (such as almond or lemon)
	Gelatin solution prepared from the following (see Note 2):
$\frac{3}{8}$ t.	1 tb. granulated gelatin
1 t.	2 tb. cold water
1 t.	2 tb. boiling water
1 tb.	$\frac{1}{2}$ c. rich cream measured <i>after</i> being whipped stiff (the cream before being whipped measures about $\frac{1}{3}$ c.)
	Meringue:
4 tb.	1 large white of egg, beaten stiff
$\frac{1}{2}$ t.	1 tb. powdered sugar
2 d.	$\frac{1}{4}$ t. flavoring extract

Method:

1. Mix well all the ingredients except the whipped cream and meringue.
2. Chill mixture 15-20 min., or until it is semi-jellied, then fold in whipped cream.
3. Cover bottom and sides of a $6\frac{1}{2}"$ circular cake tin with slices of sponge or angel cake, fill cavity with rice mixture, and chill. (Use a square or oblong tin, if preferred.)
4. When recipe is firm, turn it out on an inverted cake tin, and cover the top and sides with meringue. (If an extra pretty dish is desired, sprinkle mold with ground nuts or macaroons or grated coconut.)

5. Brown the top surface in the broiling oven *next* the flame. (The pudding is likely to melt if the baking oven is used.)

6. Chill, then slip the pudding upon a platter and slice it like cake. Serve with or without a jelly sauce.

Notes:

1. Left-over rice is often used in this recipe. Left-over cream of wheat or other cereal may be substituted for rice.

2. To prepare the gelatin solution, soak the gelatin 5 min. in the cold water, then add the boiling water and stir mixture in a double boiler until the gelatin is all dissolved.

3. Class recipe: Level measurements are essential. A muffin tin, lined with medium-thin slices of cake, is a good mold.

4. All white is the prettiest color scheme, but white and pink (or chocolate) layers, or white with chopped nuts and dried cherries, may be used.

5. This dessert is as light and fluffy as angel cake, and cuts like it.

6. A simpler pudding is made by omitting the cake and meringue; individual molds are desirable.

Ice-Cream Delicacy

Method:

1. Scoop or cut out the center of a sunshine cake, angel cake, or ordinary sponge cake, and fill the cavity with strawberry or other ice cream.

2. Cover the entire top of dessert with whipped cream.

3. Add a layer of toasted marshmallows.

4. Slice the dessert at the dining table.

Mock Egg-in-the-Nest

Method:

1. Place three large-sized Nabisco wafers side by side on a plate (these serve as toast; see recipe for egg-in-the-nest, page 76).

2. Place ice cream or sweetened whipped cream on top of the wafers (this serves as beaten white of egg).

3. Place half of a peach in the center of cream (the peach serves as egg yolk).

Orange Baskets

Method:

1. Wash orange, then remove two sections of rind from the upper half of orange, leaving a band of peel to serve as a handle.

2. Scoop out the pulp and scrape the shell clean.

3. Fill shell with cubes of orange or lemon jelly (see recipe for orange jelly, page 153).

Notes:

1. If the shells are wrapped in a damp cloth they will retain their shape for some time.

2. This recipe is a good handwork lesson.

PART VIII

**DIET FOR THE BOY AND GIRL TWELVE TO EIGHTEEN
YEARS OF AGE (HIGH-SCHOOL AGE)**

SUGGESTIONS FOR LESSONS

LUNCH BOXES:

27. Preparation of foods for a lunch box: Cheese sandwich filling. Oatmeal or corn-meal crackers

28. Preparation of foods for a lunch box: Marguerites. Bran cookies

29. Packing of lunch boxes

SIMPLE FRUIT DESSERTS:

30. Fresh or dried fruit, stewed. Steamed dates or figs. Cereal flakes with fruit juice or sauce

31. Fruit toast

32. Baked banana. Foamy orange sauce

33. Fruit rice-balls

34. Fruit escalloped with a starchy material

35. Orange jelly made with (a) gelatin, (b) agar-agar, or "vegetable gelatin"

36. Prune gelatin jelly

SIMPLE HOMEMADE CANDIES:

37. Barley-sugar candies, such as glacé fruits and nuts

38. Candy brittle

39. Marshmallows

40. Fruit-nut paste. Stuffed dates

SUGGESTIONS FOR A DAY'S MEALS

(Diet for the boy and girl twelve to eighteen years of age)

Breakfast:

Fruit
Cereal
Milk or cocoa
Bread and butter

Luncheon:

A simple complete dish (see list, page 178), such as:
 Salmon and rice loaf
 Hominy baked with cheese
 Hot-meat sandwich
Milk or cocoa
Bread and butter
Dessert, simple

Dinner:

Protein food (any simple recipe), such as:
 Broiled meat or fish
 Escalloped eggs
 Baked beans or dried-legume loaf
Potatoes or a substitute
Juicy vegetable, cooked
Fresh vegetable or fruit salad (with a simple oil or cream dressing)
Bread and butter
Dessert, simple
Milk or cereal coffee (half hot milk)

Notes:

1. Pupil to note the evolution of these menus from those listed on page 69.
2. *Kind of food:* All cereals, desserts, and other foods given the younger children are also allowed boys and girls 12 to 18 years old (that is, of the adolescent, or high-school, age). Since, in addition, other foods are allowed, the range of foods for this period is very much the same as for the adult; however, emphasis should be laid on the following points:
 - a. Give foods which are simple and easy of digestion.
 - b. Give more of the constructive, or building, foods (see list, page 7) than are necessary with adults; include the following:
 - Extra protein (milk, meat, cheese, cereals, etc.)
 - Extra mineral matter, such as:
 - Iron (especially necessary for girls of high-school age)
 - Calcium
 - Phosphorus
 - c. Give plenty of fruits and vegetables (salads, etc.).

3. *Quantity of food*: Several recent authorities are in favor of putting no quantitative restrictions (so long as digestion and assimilation remain normal) on the diet of boys and girls 12 to 18 years old, since the very great increase in appetite during these years seems to arise from some physiological need at present not perfectly understood.

" . . . the total requirement for girls from 14 to 17 will be from 2,200 to 2,600 calories; for boys of the same age from 2,500 to 3,000 calories. Very often by this time the full height will have been attained and the parents are surprised at the large consumption of food, thinking that growth has ceased. But growth is not merely a question of height. As already said, it involves laying on of muscle and fat, development of internal organs and a vigorous nervous system, and these demand food. Furthermore, muscular activity, especially out of doors, is a great aid in muscle and nerve development, and the extra fuel required to support this activity should never be begrudged young people. For five or ten years after full height is reached their food consumption will be considerably higher than that of adults of the same size. As long as they confine themselves to simple, nourishing foods they are not likely to overeat."¹

"Boys over 12 need as much food as their fathers do, and perhaps girls over 12 need as much as their mothers—although this is not certainly known."²

For a study of the caloric value and cost of foods for the adolescent age, see Mary Swartz Rose, *Feeding the Family*, pages 171–173.

4. Strong precautions, such as the following, should be taken to avoid undernutrition during the high-school age (note that "nerves" are often a sign of malnutrition):

- a. Provide three regular meals, and have them eaten leisurely. Both the home and the school should lay particular emphasis upon the necessity of a long period for the noon meal.

It is often desirable to serve dinner at noon and supper at night.

- b. In many cases, provide a simple between-meal lunch, such as egg lemonade or bread or crackers, for rapidly growing children of keen appetite. (Although three regular meals a day should be sufficient for children of high-school age, yet they often are not.)
- c. Do not allow boys and girls to go to school without breakfast. (Girls, especially, often wish to omit breakfast.)
- d. Forbid all of the following:

Stimulants (tea, coffee, etc.)

Fried foods

Rich cakes

Rich meat and fish salads, with mayonnaise

Strong condiments.

Discourage the use of very highly flavored foods. Girls, especially, are often tempted to avoid plain foods and to eat only sweets, dill pickles, etc. Such sweets, etc., blunt the appetite for substantial foods.

Use pastry very sparingly. If it is used, custard and cream pies are best; these pies are made with but one crust, and are an excellent means of supplying eggs, milk, and fruits (prunes, etc.). (See recipes, *Diet for Invalids*.)

¹Mary Swartz Rose, *Feeding the Family*, pages 169–170.

²Graham Lusk, "Food for a Day," *The Day's Food in War and Peace*, U.S. Department of Agriculture.

Use hot breads very sparingly, if at all; note the following points regarding them:

- (1) They should not be allowed as the main dishes in meals.
- (2) Almost never should they be allowed at the evening meal.
- (3) If used, they should be as crusty as possible (crust can often be secured by reheating rolls, etc., on the second day).
- (4) Waffles, griddlecakes, and baking-powder biscuits should be forbidden children under 14 years of age (they should be used sparingly later).
- (5) Use of sirup on hot bread (biscuits, griddlecakes, etc.) should not be encouraged. If allowed, the combination should be given in a small quantity only and as a dessert at a plain meal.

(The following breads, when *cold*, are often allowable: muffins, yeast rolls, baking-powder biscuits, and Boston brown bread. They are often toasted.)

LUNCH BOXES

DIETETIC SCHEME FOR A SCHOOL-CHILD'S LUNCH BOX

As a rule, the contents of a lunch box should include the following:

- One protein food
- One starchy food (such as bread)
- One fruit
- One sweet (as dessert)
- One beverage (such as milk or grape juice)

The lunch box should contain building foods, energy foods, and the other "essentials in diet." In general, the following dietetic scheme applies to adults' diet as well as to diet for younger and older children. Pupil to use this scheme in planning several lunch boxes.

I. Building foods:

Foods rich in protein:

Protein-food sandwiches (see Note 1):

- Cheese (such as cottage or cream)
- Egg, hard-cooked (chopped or sliced)
- Fish (such as whitefish)
- Legumes, dried (baked beans, etc.)
- Meat, ground (chicken, beef, or mutton)
- Nut butters (peanut, almond, etc.) or chopped nuts

Miscellaneous protein foods:

- Beans, baked
- Beverages (milk, buttermilk, and cocoa; see Note 2)
- Cheese, cottage or cream
- Custard, baked
- Eggs cooked in shell (plain or stuffed)
- Meats (not always permissible, even if easily digested), such as:
 - Loaf, such as beef
 - Roast, sliced
 - Stew (chicken, etc.)
 - Salad (chicken, etc.)
- Nuts, fresh or salted (such as almonds and peanuts)
- Soups (cream soups, dried-legume soups, and certain meat soups)

Foods rich in mineral salts:

- Breads, whole-grain (such as graham)
- Fruit juices
- Fruits, fresh juicy (apples, oranges, pears, plums, etc.)
- Milk
- Vegetables, fresh (celery, lettuce, radishes, tomatoes, etc.; see page 14, Note 2)

II. Energy-yielding foods:

Cakes, plain, with simple frosting (sponge cake, gingerbread, jelly roll, etc.)

Candy, homemade (molasses, etc.)

Chocolate, sweet

Cookies, plain (drop ginger cakes, peanut cookies, etc.)

Crackers (graham, etc.)

Fruits (fresh or dried), raw, such as:

Bananas

Dates

Figs

Raisins

Fruits (fresh or dried), stewed, such as:

Apples (also good baked)

Apricots

Peaches

Prunes

Raisins

Jelly or jam

Puddings, simple (rice, etc.)

Rolls, buttered

Salads (fruit, potato, tomato, etc.)

Sandwiches (see Note 1):

Bread and butter, plain

Sweet, such as:

Apple or other fruit butter

Date or fig (grind the fruit)

Jam or jelly

III. Bulky foods (see Note 3):

Beverages

Breadstuffs, coarse (such as breads, cookies, crackers, and muffins made of bran, graham flour, etc.)

Fruits, dried, raw or cooked (dates, figs, prunes, etc.)

Fruits, fresh, raw or cooked (apples, cherries, pears, etc.)

Pop-corn balls

Vegetables, fresh (such as celery or cabbage; see page 14, Note 2)

IV. Appetizers (see Note 4):

Beverages:

Fruit juices (such as grape)

Fruitades (such as lemon or orange; see Note 2)

Fruit jellies

Fruits, juicy, raw or stewed (apples, oranges, peaches, etc.)

Vegetables, juicy (celery, lettuce, radishes, tomatoes, etc.; see page 14, Note 2)

Notes:

1. *Sandwiches:* Protein-food sandwiches should constitute the chief part of children's lunch boxes. Since children are likely to be careless about mastication, it is well to use chopped meat in sandwiches rather than sliced meat.

See the general method for sandwiches, *Diet for Adults*, pages 116-118; this method includes a list of desirable breads for use in protein-food and other sandwiches.

See the classification of sandwich fillings, *Diet for Adults*, pages 114-116. Let the pupil check the names of those few fillings which are advisable for sandwiches for use at children's parties or in children's lunch boxes.

2. In many cases milk and buttermilk can best be carried (so as to be kept clean and cold) in the same bottles in which they were sent from the dairy. Beverages (milk, fruitades, etc.) and soups may be kept either cold or hot in thermos bottles, or they may be chilled or heated at school if facilities are offered.

3. The lunch should contain a due proportion of bulk, that is, foods rich in cellulose or water or both. Fresh vegetables are often especially relished if made into a salad.

4. Appetizers are essential. Often a little treat or surprise (such as a piece of candy or a few raisins or shelled nuts) acts as an appetizer and pleases the child.

5. Avoid pastry, fried foods, etc., in the child's lunch box.

6. See Appendix G, page 216, Note 7, for suggestions for adults' lunch boxes.

NUTRITIVE VALUE AND COST OF MENUS FOR CHILDREN'S LUNCH BOXES

Exercises for pupil:

- Discuss the balance of protein and other nutrients in each of the given menus, giving due consideration to the dietetic scheme, pages 120-122. Vary the menus if it is deemed necessary.
- Determine the cost of each menu (one serving), then specify by checks which are the less expensive menus.

Date:

MENUS	COST	MENUS	COST
I		II	
Sandwiches:		Sandwiches:	
Peanut butter.....		Cream cheese.....	
Jelly.....		Jam or jelly.....	
Olives.....		Salad, grape or cherry.....	
Orange, raw.....		Lemonade or grape juice.....	
Total.....		Total.....	
III		IV	
Sandwiches, bacon.....		Sandwiches, toast.....	
Almonds, salted.....		Orange, raw.....	
Apple, baked.....		Custard, baked.....	
Cookies, molasses.....		Cookies.....	
Total.....		Total.....	

MENUS	COST	MENUS	COST
V		VI	
Sandwiches:		Sandwiches, egg and lettuce	
Graham bread and butter		Nuts, salted	
Chicken, pressed		Cocoa	
Milk, hot or cold		Crackers, graham, with boiled frosting	
Apple, raw or baked		Pop-corn balls	
Candy, fruit (such as stuffed dates or prunes)			
Total		Total	
VII		VIII	
Sandwiches, meat-paste		Sandwiches, bread and butter	
Salad, potato and celery		Egg, stuffed	
Milk		Cherries, stewed	
Apple, raw or cooked		Cookies, sugar	
Angel cake		Dates (3 or 4)	
Total		Total	
IX		X	
Sandwiches, beef-loaf		Sandwiches, graham bread and butter	
Marmalade, orange		Egg, stuffed	
Milk		Cake, sponge	
Apple, raw		Apple, baked	
Dates (6) stuffed with almonds			
Total		Total	
XI		XII	
Sandwiches, fig and nut		Sandwiches, egg-salad	
Egg, hard-cooked in shell		Celery	
Olives, ripe		Gingercake	
Banana, very ripe		Orange	
Marshmallows (4)		Figs (2 or 3)	
Total		Total	
XIII		XIV	
Sandwiches:		Sandwiches:	
Olive, lettuce		Cottage cheese, nut	
Almond butter		Bacon, lettuce	
Soup, cream-of-tomato		Celery	
Celery		Cookies, peanut or fruit	
Snap, ginger or honey		Fruit juice (such as orange), glass	

Note:

Divide menus into three groups: best for winter diet; best for spring or fall diet; best for summer diet. Many, if not all, of the menus are suitable for sedentary adults.

GENERAL EQUIPMENT FOR A LUNCH BOX

The greater part of this outline applies equally well to children's lunch boxes and to lunch boxes for adults.

I. Outside wrappings (see Note 1):

Pupil to complete the data for the following table:

OUTSIDE WRAPPINGS	ADVANTAGES	DISADVANTAGES
Tin box (the best of all wrappings)	Keeps food moist. Is easily kept clean.	Is heavy in some cases.
Cardboard box.....
Lunch basket, well lined with paper.....
Pail.....
Folding box of metal, leather, or other material.....
Paper wrapping only.....

II. Inside wrappings and other paper conveniences (see Notes 1 and 2):

Paper napkins, tablecloth, and doilies

Cardboard plates

Paper or cardboard cartons

Paraffin paper

Paper drinking cups

III. Miscellaneous conveniences for the lunch box (see Note 3):

Thermos bottle

Thermos jar (a wide-mouthed thermos bottle)

Sealed jars of glass or other ware

Corkscrew

Small salt and pepper cases

Collapsible drinking cup

Knife, fork, and spoon set, which folds into a small space

Notes:

1. The appearance of the lunch box is most important; that is, the box must be neat and appetizing. The appearance of the box depends very largely on the outside and inside wrappings. The outside wrappings should be light in weight. Often it is a convenience to pack a lunch in several small boxes rather than in one large box; a small box is sometimes packed for each member of a large picnic party.

2. All paper conveniences are inexpensive, especially if bought in large quantities.

Pretty paper napkins can be secured for as little as 10 cents per hundred, and are cheaper bought in larger numbers.

Cardboard plates are sanitary, light, and inexpensive enough to be discarded after use.

Paper cartons are used in the same ways in which sealed jars are used (see Note 3).

Paraffin paper is manufactured in several thicknesses. It is inexpensive if bought by the pound. Paraffin paper keeps foods moist and keeps them from sticking together. It also makes the lunch dainty and attractive in appearance.

For the following reasons, nearly all solid foods for the lunch box should be neatly and separately wrapped in paraffin paper; sandwiches may be wrapped individually or collectively.

Certain foods dry out quickly, such as:

Cakes

Rolls

Meat loaf

Sandwiches

The flavors and odors of certain foods, such as the following, penetrate other foods:

Cheese

Fruits, certain fresh (such as bananas)

Meats

Onions

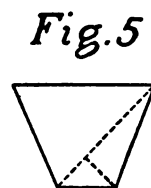
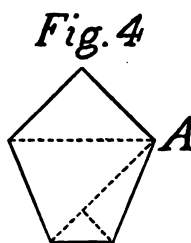
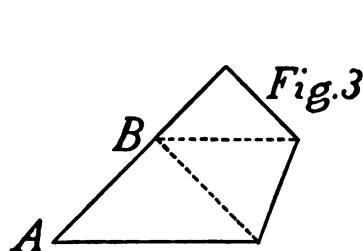
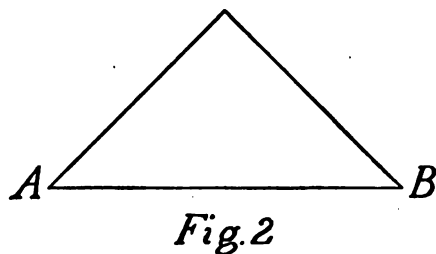
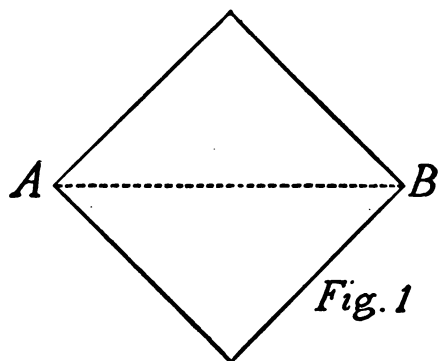
Certain foods are crushed easily, such as:

Cakes

Cookies

Eggs, stuffed

Fruits, fresh



A sanitary drinking cup, simple enough for even a young child to prepare, is made as follows (such a cup is useful in school, at picnics, or in any emergency):

- a. Secure an 8" or 10" square of stiff writing or other paper (see Fig. 1 above).
- b. Fold the paper along the dotted line AB to make Fig. 2. Then make, in turn, Figs. 3, 4, and 5. Fig. 5 is the completed cup. (Note that the cup is more secure if the triangular flap on one side is inserted between the two adjoining thicknesses of paper.)

3. A thermos bottle keeps liquids either hot or cold. The use of two or more thermos bottles makes possible hot and cold liquids for the one meal. Thermos jars are useful in various ways (keeping butter or ice cream cold, keeping stews hot, etc.).

Sealed jars (glass, etc.) are used for the packing of semi-solid or liquid foods, such as butter, jam, fruit sauce, salad or salad dressing, and lemon juice and sugar (in readiness for lemonade). Screw-top jars are often convenient.

State the advantages of wood or aluminum salt and pepper cases.

If there are dishwashing facilities in the school, it is sometimes practicable for each pupil to have his own knife, fork, spoon, plate, and cup. Enamel-ware plates and cups are light, hence suitable for this purpose.

A nursery refrigerator for the care of children's milk, etc., and a small fireless cooker are often convenient for automobile parties and large picnic parties.

4. Study Browning, *The Box Luncheon* (Cornell Reading-Courses).

SANDWICH FILLINGS

But one sandwich-filling recipe is here given, inasmuch as sandwich fillings and sandwiches have already been discussed at length on pages 102-103 ("Suggestions for Children's Parties") and also in *Diet for Adults*, pages 114-118.

Cheese Sandwich Filling

Ingredients:

1½ tb.	½ c. evaporated milk (a little more than a fourth of a pound can)
⅛ t.	¾ tb. flour (or ½ tb. cornstarch)
¼ t.	1 tb. liquid fat (such as Wesson oil, Mazola, or melted butter)
1-1½ t.	1 c. medium-rich American cheese (about 6 oz.), measured after being chopped fine or grated
½ t.	2 pimentos, chopped fine (half a small can)
dash	½ t. salt (omit if very salty butter has been used)

Method:

Use the double boiler throughout.

1. Scald the evaporated milk.
2. Mix the flour and fat to make a smooth paste, add the paste to the hot milk, and cook (with stirring) until mixture is slightly thick.
3. Add the cheese and, stirring constantly, cook the mixture just until the cheese is melted.
4. Add pimentos and salt, and store mixture in glass jars in refrigerator.

Notes:

1. Vary the quantity of fat (0-3 tb.) according to the richness of the cheese.
2. The filling when poured into the jars is as stiff as a drop batter; when chilled, it stiffens somewhat.
3. Pimentos do not keep well, hence do not store cheese filling longer than a few days.
4. This filling is particularly good on bran or brown bread.
5. Cheese sandwiches are attractive cut in the shape of triangles, bars, etc.
6. Garnish a sandwich made with cheese filling with dainty strips or bits of pimento, and wrap it in paraffin paper.

7. The class recipe for filling is sufficient for one sandwich of ordinary size.
8. *Experiment:* Make this filling with other than American cheese; for example, brick cream or Roquefort.
9. Cheese filling to which extra milk has been added is excellent as a sauce over toast.

MISCELLANEOUS CRACKERS AND COOKIES

Oatmeal Crackers

Ingredients:

1 tb.	1 c. fine oatmeal (either Scotch or steel-cut)
1 tb.	1 c. rolled oats
2 tb.	2 c. bread flour
$\frac{1}{4}$ tb.	$\frac{1}{4}$ c. sugar
$\frac{1}{8}$ t.	2 t. salt
spk.	$\frac{1}{8}$ t. soda
1 tb.	$\frac{3}{4}$ -1 c. hot water
$\frac{1}{2}$ t.	3 tb. fat

Method:

1. Mix together the dry ingredients, then add them to a mixture of the hot water and fat.
2. Roll the dough as thin as possible, and cut it in squares.
3. Place squares in a floured pan and bake them in a moderate oven.

Notes:

1. Chopped dates, figs, nuts, etc., are a possible addition to the dough (see step 1).
2. To make a cracker sandwich, spread a sweet filling (such as jam or date or fig paste) between two squares, and bake.

Corn-Meal Crackers

(Served with soup or stew)

Ingredients:

1 tb.	1 c. corn meal
2 tb.	2 c. bread flour
$\frac{1}{8}$ t.	2 t. baking powder
$\frac{1}{16}$ t.	$\frac{3}{4}$ t. salt
$\frac{3}{8}$ t.	2 tb. fat, melted
1 tb.	1 $\frac{1}{2}$ c. skim milk

Method:

1. Chop the fat into a sifted mixture of the dry ingredients.
2. Add the milk, and mix to make a stiff, smooth dough.
3. Roll dough to $\frac{1}{8}$ "- $\frac{1}{4}$ " thickness, then cut it with a knife into small triangles, squares, or rounds.
4. Place the crackers on a greased tin, prick them with a fork, and bake them 8-10 min. in a hot oven.

General Recipe for Marguerites

Method:

1. Secure saltines or oatmeal or other unsweetened crackers, and toast them or not, as desired.

2. Spread them with a $\frac{1}{8}$ "– $\frac{1}{4}$ " layer of almost any sweet material (see Note 3), such as one of the following:

Jelly, jam, marmalade, fruit butter, or stewed fruit

Dates or figs, ground

Nut butter or meal (such as almond or peanut), sweetened to taste with powdered sugar

Sirup, very thick (honey, caramel or maple sirup, etc.)

Marshmallows, whole or sliced

Marshmallow boiled frosting (steps 3 and 4 which follow are omitted in this case; see special recipe below)

3. Prepare a meringue by beating the following ingredients together with either a wire or a Dover beater until it is stiff and has finger-like projections:

1 white of egg, beaten stiff

1–2 tb. powdered sugar

4. Spread meringue on crackers (over the coating of sweet material) in a thick layer or pile it in any attractive fancy shapes, using a pastry bag if desired.

5. Bake the wafers 2–8 min. in a steady moderate oven until the meringue is puffed and slightly brown.

6. Serve wafers with sweet salads or with ices and other desserts.

Notes:

1. This or the following dessert is sometimes served without being baked.

2. Flavoring extract, chopped nuts, cherries, melted chocolate, and coloring pastes are possible additions to the meringue.

3. Let the pupil bring from home marmalade or other sweet material.

Boiled-Frosting Marguerites

Ingredients:

	Marshmallow boiled frosting (see Note 1):
3 tb.	$\frac{1}{2}$ c. sugar
2 tb.	$\frac{1}{4}$ c. water
1 marshmallow	3 marshmallows, cut in small pieces
3 tb.	1 white of egg, beaten stiff
	Additions to frosting (see Note 2):
4 d.	$\frac{1}{8}$ t. vanilla
1–2 meats	$\frac{1}{4}$ c. English walnut or other nut meats, chopped
$\frac{1}{2}$ t.	$\frac{1}{4}$ c. of one or any mixture of the following:
	Coconut, shredded
	Currants
	Dates, figs, or raisins, chopped
1 or 2	12–18 double saltines

Method:

1. Prepare the frosting as follows:
 - a. Boil sugar and water together to the "hairing" stage. (Remove the class recipe from the fire just as soon as a $\frac{1}{4}$ " hair can be pulled from the spoon by the finger tip.)
 - b. Turn gas very low, add marshmallows, and stir just enough to dissolve the candy; avoid much stirring.
 - c. Stirring the whites constantly, add the sirup to them in a steady stream, then beat 2-3 min. with a Dover beater.
2. Add the vanilla, nuts, etc., to the frosting.
3. Spread the saltines with a thick layer of this fancy frosting.
4. Bake the wafers 5-15 min. in a steady moderate oven until the frosting is slightly brown and has risen very high.

Notes:

1. The given recipe for frosting is also good for use on cakes; with the addition of the nuts, etc., it makes a good cake filling. The marshmallows are not an essential ingredient.
 2. Apricots or any other dried fruits may be substituted for the dried fruits listed.
 3. Marshmallows, used in either of the following ways, swell upon being toasted:
 - Used whole or sliced (as candy or in marguerites)
 - Used as a part of the boiled frosting for marguerites
- May this swelling be due to (a) steam expansion or (b) swelling of gelatin?

Gingersnaps*(Stiff dough)***Ingredients:***(4 doz. medium snaps)*

1 t.	$\frac{1}{4}$ c. butter or a substitute
2 t.	$\frac{1}{2}$ c. molasses (not black)
1 t.	$\frac{1}{4}$ c. brown sugar
2 tb.	$1\frac{1}{2}$ c. bread flour
$\frac{1}{16}$ t.	$\frac{3}{4}$ t. ginger
$\frac{1}{24}$ t.	$\frac{1}{2}$ t. soda
dash	$\frac{1}{2}$ t. salt (to be omitted if fat has been salted)
$\frac{1}{2}$ t.	$1\frac{1}{2}$ -2 tb. flour for rolling

Method:

1. Heat the fat and molasses together until the fat is melted.
2. Add the sugar and mix well.
3. Add the $1\frac{1}{2}$ c. flour, ginger, soda, and salt sifted well together.
4. Chill mixture $1\frac{1}{2}$ hr., or until it is very hard and cold.
5. Working in a cool room, roll the dough to $\frac{1}{8}$ " thickness, cut it into rounds, and place them in floured tins.
6. Bake them 10-15 min. in a moderate oven, 350°-400° F., or 176°-204° C.

Notes:

1. May these ingredients be mixed by any other methods?

2. Molasses, like chocolate, burns easily.
3. The following statements are true of snaps in general (ginger, honey, etc.):
 - a. The less flour used, the more delicate the texture of the snaps.
 - b. If dough is too soft to handle, chill it; if it is too hard to handle, warm it slightly.
 - c. All snaps are soft when taken from the oven, but they harden upon being cooled.
4. If preferred, many recipes for snaps, such as the foregoing gingersnaps, may be baked as wafers, a type of cooky characterized by extreme thinness. To prepare wafers, roll snap or other dough to $\frac{1}{16}$ " thickness, or until it is almost as thin as paper, then bake. In preparing the tins, use lard, Crisco, or flour, not butter, so that the wafers will not scorch. After wafers are baked, they should fit together like so many coins. Wafers (chocolate, ginger, honey, etc., or ice-cream cones) are an excellent handwork lesson.

Chocolate Snaps

(Stiff dough)

Ingredients:

(3 doz. $2\frac{1}{2}$ " wafers)

$\frac{3}{4}$ t.	$\frac{1}{4}$ c. butter or a substitute
2 t.	$\frac{1}{2}$ c. sugar
1 t.	1 medium egg, well beaten
$1\frac{3}{4}$ tb.	$1\frac{3}{8}$ c. pastry flour
dash	$\frac{1}{8}$ t. salt
$\frac{1}{16}$ t.	$\frac{1}{2}$ t. cinnamon (or 1 t. vanilla)
$\frac{1}{32}$ t.	$\frac{1}{4}$ t. soda
$\frac{1}{4}$ t.	1 tb. milk
$\frac{3}{4}$ t.	1 square (1 oz.) bitter chocolate, melted and cooled

Method:

1. Prepare the dough by the creamed-fat, or standard, method for cakes, adding the chocolate at the very last.
2. Roll dough to $\frac{1}{16}$ " thickness, cut it into rounds, and bake them 10-20 min. in a moderate oven.

Ice-Cream Cones

Ingredients:

$\frac{1}{8}$ tb.	$\frac{1}{4}$ c. butter
1 tb.	$\frac{1}{2}$ c. powdered sugar
6 d.	$\frac{1}{2}$ t. vanilla or almond extract
$\frac{1}{2}$ tb.	$\frac{1}{4}$ c. milk
$1\frac{1}{2}$ tb.	1 c. pastry flour

Method:

1. Beat the first three ingredients together, then slowly add the milk (drop by drop at first).
2. Add the flour, and stir the mixture only until it is smooth.

3. Spread mixture (with a spatula) to $\frac{1}{8}$ " thickness on the bottom of dripping pans, inverted and buttered, and mark in 4"-6" squares.

4. Bake squares in a slow oven 10-15 min., or until they are delicately browned, then cut them apart.

5. Roll each square into a cone or cornucopia, using the softest corner of square as the tip of cone. *Caution:* Roll squares while they are very hot, else they will crack. If necessary, return some squares to the oven so as to soften them.

Notes:

1. The class recipe makes one square 4" × 4".
2. If preferred, roll the squares into tubular forms, and fill them with whipped cream.
3. This mixture is also good spread (raw) by the teaspoonful in circular forms, and baked as wafers.

Hermits

(Soft dough)

(24 hermits)

Ingredients:

$\frac{1}{2}$ t.	2 tb. butter or a substitute
$\frac{1}{2}$ tb.	$\frac{1}{2}$ c. granulated sugar
1 t.	2 eggs, beaten very light
1 tb.	1 c. bread flour
$\frac{1}{2}$ t.	$\frac{1}{2}$ t. soda
dash	$\frac{1}{2}$ t. salt
dash	$\frac{1}{2}$ t. cinnamon
$1\frac{1}{2}$ tb.	$1\frac{1}{2}$ c. rolled oats (as purchased)
$\frac{3}{4}$ t.	$\frac{1}{4}$ c. English walnut meats, chopped
1 t.	$\frac{1}{2}$ c. raisins, chopped

Method:

1. Prepare the dough by the creamed-fat, or standard, method for cakes, adding last three ingredients at the end. (For cake method, see *Diet for Adults*, page 55.)
2. Using a very little extra flour, roll the dough with the hands into balls 1" in diameter.
3. Place balls 1" apart on a greased tin, and bake 20-25 min. in a slow oven.

Notes:

1. Delicious bran cookies are made by the substitution of 2-2 $\frac{1}{2}$ c. bran for the $1\frac{1}{2}$ c. rolled oats in this recipe.
2. Excellent peanut-butter cookies (rich in protein) are made by the substitution of 5 tb. peanut butter for the 2 tb. fat in this recipe. (Why use 5 tb., not 2 tb., peanut butter? Note that peanuts are almost 40 per cent fat.)
3. The dough for hermits and their derivatives may be dropped by the teaspoonful.
4. As a rule, either drop cookies or cookies rolled in the hands are made more quickly than roll cookies. With most mothers, time is usually an important factor.
5. Hermits and bran cookies are better when old.
6. For a variation suitable only for adults, see Appendix G, page 216, Note 5.

Corn-Flake Macaroons**Ingredients:**

$\frac{1}{2}$ tb.	2 eggs, beaten very light
1 tb.	1 c. granulated sugar
4 d.	$\frac{1}{2}$ t. vanilla extract
$\frac{1}{2}$ tb.	$\frac{1}{2}$ c. shredded coconut
$\frac{1}{4}$ c.	4 c. crisp corn flakes

Method:

1. Beat the first three ingredients together thoroughly.
2. Add the remaining ingredients and mix only enough to make the ingredients stick well together.
3. Drop the mixture by the teaspoonful on a greased tin, and bake 15–25 min. in a slow oven.
4. Cool the macaroons somewhat, then remove them from the tin.

Notes:

1. Numerous variations of this recipe are possible; for example:

a. Beat stiff one or both of the whites of eggs, and fold them into the mixture just before it is baked.

- b. Substitute the following for the given ingredients:

3 whites of eggs, beaten stiff
 1 c. granulated sugar
 $\frac{1}{3}$ t. almond extract
 1 c. shredded coconut
 2 c. corn flakes

Add the last five ingredients to the beaten whites of eggs, beat the mixture until it is smooth, then bake.

- c. Substitute the following for the given ingredients:

2 eggs, beaten very light
 $\frac{1}{2}$ c. sugar
 $\frac{1}{2}$ c. white corn sirup
 $\frac{1}{2}$ t. vanilla extract
 1 c. shredded coconut
 3 c. corn flakes
 $\frac{1}{4}$ t. salt

2. Rolled-oats macaroons (note relation to hermits, page 131) are similar to corn-flake macaroons, except for the use of rolled oats, in place of corn flakes, and differences in fat, etc. Note two possible recipes, in either of which the yolks and whites of eggs may be beaten separately, if preferred:

- a. 2 eggs, beaten very light
 1 c. granulated sugar
 $\frac{1}{2}$ t. vanilla extract
 2 c. rolled oats (as purchased)
 1 t. salt
 2 tb. butter, melted and cooled

- b. 2 eggs, beaten very light
 1 c. white corn sirup
 $\frac{3}{4}$ t. vanilla extract
 4 c. rolled oats (as purchased)
 1 t. salt
 2 t. baking powder
 2 tb. fat, melted and cooled

Drop Peanut Cookies*(Thick batter)**(50-60 cookies)***Ingredients:**

1 t.	$\frac{1}{4}$ c. butter or a substitute
2 t.	$\frac{1}{2}$ c. granulated sugar
2 t.	2 eggs, beaten very light
$\frac{1}{8}$ t.	$1\frac{1}{2}$ t. baking powder
dash	$\frac{1}{2}$ t. salt
$1\frac{1}{2}$ tb.	1 c. pastry flour
1 t.	$\frac{1}{4}$ c. milk
4 d.	1 t. lemon juice
$\frac{3}{4}$ tb.	$\frac{3}{8}$ c. finely chopped peanuts (crisp roasted nuts)
4 halves	Halves of peanuts, for the tops of cookies

Method:

1. Prepare the batter by the creamed-fat, or standard, method for cakes, adding the lemon juice and the chopped nuts at the very last.
2. Allowing 1" between the cookies, drop the batter by the teaspoonful on a greased tin.
3. Place one-half a peanut on top of each cookie.
4. Bake the cookies 8-12 min. in a moderate oven.

Notes:

1. Avoid extra egg or flour, else the cookies will be tough.
2. Chopped almonds or other nuts may be substituted for peanuts.
3. The cookies should flatten in the oven into cakes almost as thin as wafers. (See page 130, Note 4.)

FLOUR MIXTURES MADE WITH SIRUP

Ingredients for five specific recipes follow. For a general method, and for suggestions regarding each of the recipes, see pages 135-136.

Drop Molasses Cookies**Ingredients:***($1\frac{1}{2}$ -2 doz. cookies)*

$2\frac{3}{4}$ tb.	2 c. bread flour
1 t.	$\frac{1}{4}$ c. granulated sugar
$\frac{1}{2}$ t.	$\frac{1}{2}$ t. soda
dash	$\frac{3}{4}$ t. ginger
$\frac{1}{16}$ t.	1 t. cinnamon
dash	$\frac{1}{2}$ t. salt
2 t.	$\frac{1}{2}$ c. molasses
1 t.	$\frac{1}{4}$ c. boiling water
1 t.	$\frac{1}{4}$ c. fat, melted
1 t.	$\frac{1}{4}$ c. raisins, chopped (optional)
1 t.	1 egg, beaten very light (see Note 5, a, page 135)

Drop Honey Cookies*(3 doz. cookies)***Ingredients:**

1 tb.	1½ c. bread flour
½ t.	¼ c. granulated sugar
½ t.	¾ t. soda
1 t.	½ c. extracted honey
½ t.	¼ c. thick sour milk
1 t.	1 egg, beaten very light
½ t.	¼ c. butter or a substitute, melted and cooled
¾ t.	¾ c. raisins, chopped (optional)

Roll Molasses Cookies*(2 doz. cookies)***Ingredients:**

2 tb.	2 c. bread flour
⅛ t.	⅞ t. soda
⅛ t.	1 t. ginger
dash	½ t. cinnamon
dash	½ t. salt
½ tb.	½ c. molasses
½ tb.	½ c. thick sour milk
¼ tb.	¼ c. fat, melted and cooled
¼ tb.	1-4 tb. bread flour for the board (<i>if necessary</i> for rolling purposes)

Molasses Cake**Ingredients:**

2½ tb.	2½ c. bread flour
⅛ t.	1½ t. soda
⅛ t.	2 t. ginger
⅛ t.	1 t. cinnamon
dash	¾ t. salt
1 tb.	1 c. molasses (not black)
1 tb.	1 c. thick sour milk
¾ t.	¼ c. butter or a substitute, melted and cooled

Honey Cake**Ingredients:**

2 tb.	2 c. bread flour
⅛ t.	1 t. soda
dash	½ t. ginger
dash	½ t. cinnamon
½ tb.	½ c. sour milk
1 tb.	1 c. extracted honey
½ tb.	½ c. butter or a substitute, melted
¾ t.	1 egg, well beaten

GENERAL METHOD FOR FLOUR MIXTURES MADE WITH SIRUP

(For drop cookies, roll cookies, and cakes)

1. Sift together all the dry ingredients.
2. Mix the wet ingredients together.
3. Add the dry ingredients to the wet ingredients, and stir the mixture only until it is very smooth; see Note 2. (For an exception as to the combination of eggs and boiling water, see Note 5, a.)
4. Add nuts and fruit, if used (see Note 3).
5. Place the cookies and cakes in tins, as follows (see Note 4):

Drop cookies: Allowing 1"-2" between cookies, drop the batter by the teaspoonful or tablespoonful upon greased tins. If preferred, drop each cookie into a greased muffin tin.

Roll cookies: Place these in greased tins. (The cookies should have been formed as follows: Working in a cool place, roll the dough to $\frac{1}{4}$ " thickness, then use a cookie-cutter; the less flour used for rolling purposes, the more tender the cookies.)

Cakes: Place batter in a greased shallow pan.

6. Bake all the flour mixtures in a moderate oven, 374° F., or 190° C. (Beware of a hot oven with molasses mixtures, since they scorch easily.)

Drop cookies and roll cookies: Bake these 10-20 min., or until they are firm to the touch.

Cakes: Bake these 25-30 min., or until they are firm. Beware of jarring the oven or keeping the oven door open.

Notes:

1. Steps 1, 2, and 3 constitute the method generally used with muffins.
2. Note a general rule for sirup-flour mixtures, especially when sour milk is used: Work quickly, mix slightly, and bake at once (else part of the carbon dioxide is likely to escape). Thorough blending of all the flour mixtures is essential, however.
3. Spice, chopped nuts, and fruits are optional ingredients in all sirup-flour mixtures. An excellent way to swell raisins, currants, etc., for use in these and other flour mixtures (such as fruit cake and hermits) is to soak them, then boil them 1-5 min. in a little water.
4. Since the flour content of every sirup-flour mixture varies according to the sirup used (see page 137, Note 2), it is often well to bake small test cakes, especially in work with cakes and drop cookies.
5. Note suggestions regarding typical recipes for sirup-flour mixtures on pages 133-134. Level measurements of sirup and all other ingredients are essential in all recipes given. Suggestions as to drop molasses cookies, page 133:
 - a. In this, or any other recipe where eggs and boiling water are both used, the eggs should be added the last thing, that is, after the dry ingredients have been mixed with the water, etc. (Why?)
 - b. The raw mixture should be almost as stiff as a soft biscuit dough, that is, so stiff that it will scarcely drop from the spoon.
 - c. In the beginning it is well to have the oven almost cold, else the cakes will not flatten as they should.

- d. The class recipe is good as it is; it is also good if steel-cut oatmeal is substituted for all the white flour. (Pupil to test the large recipe, using either oatmeal or graham flour; note that both these flours are laxative in effect.)

Suggestions as to molasses cake, page 134:

- a. It is a thin batter.
 b. New England pudding is a dessert made as follows: Spread whipped cream on hot gingercake, then sprinkle it with powdered sugar.
 c. Cheese (such as American) is a possible substitute for the fat in this or any other gingercake recipe.

Suggestions as to the other three recipes, page 134:

Drop honey cookies: The batter should drop by rather stiff spoonfuls.

Roll molasses cookies: The dough (soft) should be allowed to stand several hours in a refrigerator before it is rolled. The cookies are very plain and economical. (Are many other sirup-flour mixtures economical?)

Honey cake: This is a batter between 1:1 and 2:1.

6. In accordance with Note 2, page 137, let the pupil develop general recipes, that is, recipes which are satisfactory with all sirups. Three general recipes are suggested below. They are given as a basis for experiment and calculation by the pupil. The first three ingredients listed vary in quantity because of variation in the kind of sirup used.

INGREDIENTS	DROP SIRUP COOKIES	ROLL SIRUP COOKIES	SIRUP CAKES
Flour, bread.....	1-2½ c.	1-2½ c.	1¼-2½ c.
Sugar, granulated.....	0-4 tb.		
Soda.....	¼-1 t.	¼-1 t.	½-1½ t.
Spice.....		0-2 t.	0-3 t.
Salt.....		½ t.	¾ t.
Sirup.....	½ c.	½ c.	1 c.
Milk, thick sour.....	¼ c.	½ c.	1 c.
Egg, well beaten.....	1 egg		
Fat, melted and cooled.....	¼ c.	¼ c.	¼ c.
Fruit, chopped.....	¾ c. raisins		

General Notes on Sirups for Use in Flour Mixtures

1. *Possible sirups:* The following sirups may be used singly or in any suitable combination in the preparation of breads, cookies, cakes, and other flour mixtures:

Honey (extracted)	Molasses
Maple sirup	Corn sirup, white or brown (such as Karo)
Meltose ¹ (a sirup made from cereals)	Sorghum
Glucose	Fruit sirups as thick as molasses (apple, etc.)

Pupil to define glucose (sirup). Note that corn sirup is chiefly glucose.

A mixture of half honey and half corn sirup is often especially good (since honey is almost too sweet by itself, and corn sirup is not sweet enough).

Flour mixtures made with honey keep fresh much longer than those made with another sirup or with sugar; honey cakes, etc., will often keep fresh for months. Note economy.

¹ The Kellogg Food Company, Battle Creek, Michigan.

2. *Substitution of sirups*: All sirups, including those listed in Note 1, may be used *interchangeably* in all flour mixtures, cupful for cupful. However, the following facts must be considered:

- a. Sirups differ somewhat in sweetness, hence the resultant flour mixtures will also differ in this respect.
- b. Slightly varying quantities of the following must be used in the flour mixtures:
 - (1) Flour (owing to differences in the thickness of the sirups)
 - (2) Leaven, that is, soda or baking powder (owing to differences in the acid content of sirups; see Note 3)

3. *Acid content of sirups*:

- a. As a rule, molasses from a freshly opened can contains but very little acid.
- b. Molasses bought by the bulk always becomes more or less acid on standing—according to whether or not conditions are favorable for fermentation.
- c. Honey¹ is less acid than most molasses, hence, as a rule, it requires less soda than molasses; use $\frac{1}{4}$ – $\frac{1}{2}$ t. soda to 1 c. honey. ($\frac{3}{4}$ t. soda is used to 1 c. molasses.)
- d. Corn sirup contains but very little acid.
- e. Pupil to test the acidity of various sirups by means of litmus paper.

Soda or baking powder is required as follows in sirup-flour mixtures:

- a. Soda is always required if sour milk is used in a mixture. (It is probably true that the majority of sirup-flour mixtures are made with sour milk.)
- b. If sweet milk or boiling water (rather than sour milk) is used in a sirup-flour mixture, either soda or baking powder is required, depending upon whether or not the *sirup is acid*. (Molasses, honey, and fruit sirups usually require soda; some molasses and most corn sirups require baking powder only.)

(Baking powder, *in addition to soda*, is sometimes used in sirup and other flour mixtures.)

4. *Types of molasses*: Light (New Orleans); dark (Porto Rico). The dark molasses is of stronger flavor, and is especially adapted to gingercake and Indian-meal pudding.

5. Sirup (molasses, corn sirup, etc.) and sugar are both browning agents.

CAKES MADE WITH SUGAR²

Jelly Roll

Ingredients:

$\frac{1}{3}$ t.	3 tb. corn or Wesson oil (see Note 3)
1 tb.	$\frac{3}{4}$ c. sugar
1 h. tb.	3 eggs, beaten very light
$\frac{1}{2}$ t.	1 tb. milk
$1\frac{1}{2}$ tb.	1 c. pastry flour
$\frac{1}{8}$ t.	1 t. baking powder
dash	$\frac{1}{4}$ t. salt

¹ See Caroline L. Hunt and Helen W. Atwater, "Honey and Its Uses in the Home," *Farmers' Bulletin 653*, U.S. Department of Agriculture.

² For further recipes, see the simplest of the cake recipes (sponge cake, etc.) given in *Diet for Adults*.

Method:

1. Mix the ingredients by the standard cake method or by any other of the six methods for cakes containing fat (see *Diet for Adults*, pages 55-57).
2. Line the bottom and ends of a cake or dripping pan (about 14"×10") with a strip of well-greased paper, and grease the sides of pan.
3. Cover pan evenly with batter to $\frac{1}{3}$ "- $\frac{1}{2}$ " depth, and bake it 15-20 min. in a moderate oven.
4. Lift cake from pan by means of the paper, and invert it upon a board covered either with a thin layer of powdered sugar or with a slightly dampened cloth.
5. Perform the following steps immediately and with speed:
 - a. Remove paper from cake.
 - b. Cut off (or soften by squeezing) hard edges of cake, and spread cake with jelly or jam which previously has been beaten to a soft consistency.
 - c. Roll cake while it is still very hot.
 - d. Sprinkle cake on all sides with powdered sugar.
 - e. Wrap cake in paraffin paper so as to keep it in shape.

Notes:

1. Avoid extra flour in the recipe, else the cake will crack while being rolled. The batter should be between a thin and thick batter; that is, it should pour in a heavy stream.
2. If, after the paper is removed, the cake is too hard to roll, soften it by letting it stand in an oven for a moment.
3. Oils are doubtless better for use in jelly rolls than the hard fats. Miller and Allen make the following statement in regard to cakes in general: "The consistency of the fat used in cakes has a marked effect upon the texture. Very hard fats produce a fine, close grain similar to a pound cake. The cut surface is firm and somewhat resistant to pressure. This firmness is due to the hardening of the fat. When eaten the cakes are tender and crumble easily. In contrast to these [cakes made with hard fats], cakes made with the oils are light and spongy, and have a loose, coarse texture. They are soft instead of crumbly in the mouth."¹
4. Various sweet materials, such as the following, may be substituted for jelly or jam:
 - Fruit butter or paste (such as apricot, date, or fig)
 - Thick sirup (such as honey or maple sirup, alone or with whipped cream)
 - Almost any cake filling or icing, such as marshmallow boiled frosting, chocolate filling, or cream filling or icing.
5. Possible substitutes for powdered sugar are as follows:
 - Coconut, shredded (either white or browned in oven)
 - Macaroons, ground
 - Nuts, chopped
6. Note the following class suggestions:
 - a. Spread the class recipe to $\frac{1}{4}$ " thickness in an oblong pan (such as a bread pan 5"×2 $\frac{1}{2}$ ", bottom measurement), then bake it.
 - b. Follow instructions given in Note 2.
7. See *Diet for Adults*, page 191, for the use of boiling-water sponge cake as a jelly roll.

¹ "Problems in Cake Making," *Journal of Home Economics*, December, 1918, page 546.

DESSERTS

DESSERTS ALLOWED CHILDREN: A SYNOPSIS

I. Desserts made on a milk basis (see Note 3):

Custards, firm or soft (and their simple derivatives, such as bread pudding)

Ice creams (such as caramel)

Junket

Sea-moss puddings

Sherbets, milk

Starchy puddings:

Arrowroot

Bread

Cereal (such as rice, with dates or figs)

Cornstarch

Flour (barley, rice, etc.)

Sago

Tapioca

II. Desserts not made on a milk basis:

Bread, toast, or crackers spread with butter and any of the following (for example, in the form of sandwiches):

Jams, jellies, and preserved fruits (all homemade)

Sirup, such as honey, molasses, or maple, corn, fruit, or cane-sugar sirup (bread spread with thick cream, then with thick maple sirup, is good)

Sugar, sprinkle of (sugar and cinnamon are good on hot buttered toast)

Cakes, plain, such as:

Angel and sponge (sunshine cake, lady fingers, etc.)

Ginger

Candies, simple homemade, and lump sugar (all taken in small quantities)

Cereal, cooked with dates, such as rice or farina (serve with cream or fruit juice)

Cereal, ready-to-eat, such as corn or rice flakes or shredded wheat biscuits (serve with cream or fruit juice)

Charlotte russe

Chocolate, sweet (such as milk chocolate), in small quantities

Comb honey (with milk as a sauce)

Cookies, plain (such as ginger or bran; the latter are especially desirable)

Cream puffs

Cream, whipped (flavored with prune juice, dry cocoa, or other ingredient)

Dates, raw or steamed (with plain or whipped cream)

Fruit desserts (see Note 4):

Fruit, raw

Fruit, stewed

Fruit toasts

Gelatin jellies (such as orange or prune jelly)

Ices and sherbets

Shortcakes

Whips (apple snow, snow pudding, etc.)

Notes:

1. This list is not specified for any one age of child, since each mother must use her own judgment, or that of an authority, according to the age and health of the child. Only very simple forms of the desserts listed should be given.

2. The following sauces may be poured over many of the desserts listed:

Milk

Cream, plain or whipped

Fruit juice (from raw or cooked fruit)

The milk and cream may be flavored with sugar and vanilla; and, too, they may be tinted.

3. Junket and other desserts made on a milk basis are especially useful in the diet of the child who does not like milk as a beverage.

Blanc mange is the term used to designate any white molded pudding made on a milk basis, such as:

Cornstarch mold

Sea-moss mold

Junket

Custard, baked (made with the white of egg only)

4. Milk and naturally sweet fruit are doubtless the best sources of sugar for children. If little or no sugar is added to the fruit, any of the following kinds of fruit may be used:

Fruit, dried (dates, figs, prunes, raisins, etc.)

Raw

Cooked (stewed, steamed, or baked)

Fruit, not dried (almost any kind, if fresh, ripe, and not too sour):

Raw fruit, served as follows:

By itself

With shredded wheat biscuits (use strawberries, etc.)

As a filling for popovers or simple shortcake

As a spread for toast, etc.

Fruit cooked as follows:

Freshly stewed (highly recommended)

Steamed

Baked (such as apples)

5. Sweets, if taken in great moderation and at meal time, are good for growing children. Sweets never should be given between meals. If simply prepared, the dessert may

furnish a large proportion of the nutriment represented in a meal. The following are examples of very simple desserts:

Snow pudding

Baked custard

Floating island

Junket, a flavored and jellied milk (one of the simplest and most digestible of all desserts)

Ice cream with plain cake constitutes an almost balanced combination and sometimes is a good *meal* even for children.

"Avoid all cake except plain cookies, gingerbread, or sponge cake, and [give] these latter only to older children in limited quantity."¹

6. Milk sugar (powdered) is an excellent form of sugar to use in the preparation of many desserts for children.

Certain Battle Creek authorities recommend Meltose (a malt sugar) as a substitute for cane or beet sugar in all recipes. These authorities make the following statement concerning Meltose candies and marmalade: "Even children may indulge as freely as they like in these sweets. They are as harmless as bread."

THICKENING AGENTS USED IN COOKING²

The following agents are used for thickening (stiffening, jellying, or setting) milk, other liquids, and thin mixtures:

Non-starchy materials:

*Albumin, found in eggs (see Note 2)

Agar-agar (sold as "vegetable gelatin")

Gelatin

Okra

Pectin (of use in fruit jellies and marmalades)

*Rennin

*Sea-moss (Irish, Iceland, etc., including powdered moss)

Starchy materials (see Notes 3-7):

*Arrowroot Flour (many kinds)

*Cornstarch Flour, partially dextrinized (browned by dry heat)

Manioca Bread or cracker crumbs

Potato starch Flour pastes (macaroni, spaghetti, vermicelli, and

Rice powder noodles)

*Sago Breakfast cereals (farina, rice, pearl barley,

*Tapioca rolled oats, etc.)

Additional agent:

Evaporation

Notes:

1. The asterisk denotes agents which are probably more commonly used with milk than with any other liquid or with a thin mixture.

¹Mary Swartz Rose, *The Feeding of Young Children*.

²This outline is applicable in the preparation of desserts and all other dishes.

The following terms are sometimes used in cooking (pupil to give examples of each):

Milk jellies

Starch jellies

Custard jellies, or custards (both egg-milk and egg-starch)

For a definition of "blanc mange," see page 140, Note 3.

2. Two yolks of eggs may be used in place of one whole egg; this is a general rule in cooking, applicable to practically all recipes. The rule has special bearing upon the thickening value of eggs.

3. The first seven of the starchy agents listed are practically pure starch. Which of these is the purest form of starch? Compare jellies made from these so-called pure starches with regard to (a) color and clearness, (b) flavor, (c) consistency.

Outline the steps in the manufacture of starch from corn. (See Sherman, *Food Products*, pages 259-262; Remsen, *Organic Chemistry*, 1909 ed., pages 202-203, etc.)

4. Flour, upon being browned, loses in thickening power. If flour is heated until it is very brown, the flour has no thickening value.

5. Discuss the composition and manufacture of macaroni and spaghetti.

6. Unsweetened chocolate is about 28 per cent starch. Although chocolate is used chiefly as a flavoring, yet its thickening value must always be taken into account.

7. In adding starchy powders and meals to hot or cold liquids, use one or more of the following blends (pupil to add to the lists of recipes in which these blends may be used):

a. Dry blend (such as sugar), used in preparing:

Cream-pie fillings (lemon, etc.)

Puddings (cornstarch, etc.)

Pudding sauces

b. Fat blend (butter or a substitute), used in preparing:

Gravies

Sauces (white, etc.)

Soups

c. Cold-liquid or tepid-liquid blend (only a *small* quantity of liquid is employed), used in preparing:

Gravies

Sauces (white, etc.)

Soups

Is it ever advisable to use any of the following in adding starchy powders and meals to liquids?

Large quantity of cold or warm liquid, as a blend

Hot liquid, as a blend

No blend

8. Pupil to supply data for a table, using the following headings:

THICKENING AGENTS (Including all those listed on page 141)	SOURCE (Such as plant and country from which derived)	USES (In puddings, soups, gravies, sauces, etc.)
--	---	--

9. Pupil, as far as possible, to state the quantity of each of the non-starchy and starchy agents required to set, or mold, 1 c. liquid in a recipe which is to be served ice cold. Use past experience, experiment, and standard cookbooks as a basis for answers.

The following data (average quantities required to solidify, or mold, 1 c. liquid in a recipe which is to be served ice cold) are offered to the pupil as a basis for discussion and experiment:

- 1 whole egg, or 2 yolks of eggs (in firm custard)
- 2 t. granulated gelatin
- $\frac{1}{4}$ junket tablet
- 1 t. rennet
- $\frac{1}{16}$ oz. agar-agar (so-called vegetable gelatin)
- 6-8 tb. partially dextrinized flour
- 3 tb. flour
- 2 tb. sago or granulated tapioca
- $1\frac{1}{2}$ tb. cornstarch
- 1 tb. arrowroot

REAGENTS COAGULATING (CURDLING) MILK

The following table deals with reagents which cause the casein of milk to separate from the whey.

Pupil to mention various uses of the reagents under the headings given below:

REAGENTS	HOME OR FACTORY CHEESE-MAKING	GENERAL COOKING	DIGESTION
I. Rennin:			
1. Rennet (a liquid)			
2. Junket tablets (rennin tablets)			
II. Organic acids:			
1. Acids in tomato and many vegetable juices			
2. Acids in lemon and other fruit juices			
3. Dilute acetic acid (vinegar)			
4. Lactic acid, produced by lactic-acid bacteria:			
a. Natural			
b. Artificial (such as Lactone tablets)			
III. Mineral acids (such as hydrochloric acid)			

Notes:

Add one or two drops of dilute acid (any kind) to a small quantity of milk, let mixture stand a few minutes, then strain through cheesecloth, and examine the texture of curd.

SIMPLE FRUIT DESSERTS¹*(Not made on a milk basis)***Fresh Fruit Stewed****Ingredients:**

Raw fruit (fresh and mild) in season, such as:

Apples

Cherries

Apples (sweet) and quinces

Peaches

Apricots

Plums

Water (almost to cover, or just enough to keep the fruit from scorching)

Sugar (if necessary)

Method:

1. Wash the fruit, and in some cases pare or peel it and cut it in slices.
2. Add water, and stew the fruit until it is tender.
3. Add sugar (to some fruits), stir to dissolve the sugar, then cook the fruit 1-2 min. longer.

Note:

Freshly stewed fruits in season are an excellent form of fruit for children. They (and other cooked fruits) are especially valuable in summer diet. To steam fruits, place them in a granite basin, add sugar, and cook them in a steamer until they are tender.

Dried Fruit Stewed**Method:**

1. Wash dried fruit (such as apricots, dates, figs, prunes, or raisins) and soak it over night in cold water to cover.
2. Stew the fruit in this same water until it is tender, adding a little sugar if desired (stone the dates, as a rule, before cooking them).

Notes:

1. If a date or fig paste is desired, cook fruit to a pulp; such paste is good in sandwiches or with cereal, such as rice.
2. Lemon juice is sometimes an addition to dates or figs stewed whole or in the form of a paste.
3. Fruit prepared by this method or by one of the two succeeding methods is good served in either of the following ways:
As a dessert by itself
With rice or other cereal either as a dessert or as a breakfast food

Dried Dates or Figs Steamed**Method:**

1. Cleanse dried fruit and steam it until it is very tender. Stone dates, if desired, before steaming them.
2. Serve fruit with cream.

¹ It is recommended that the pupil bring from home fruits for use in part or all of the fruit-dessert lessons.

Dried Dates or Figs Served Raw

Method:

1. Separate dried dates or figs, wash them, place them in a sieve, and plunge them into boiling water for an instant only.
2. Drain, and cover them with cold water.
3. Dry them on a towel or in a warming oven or in the sun.
4. Place them in a glass dish, chill them, and garnish with plain or whipped cream and a sprinkle of powdered sugar. Sometimes the fruit is chopped before being served.

Note:

As an extra precaution against contamination (see step 1) it is sometimes well to steam, or puff, the fruit for a short time. Thorough cleansing of the fruit is essential, both because of the danger of bacteria and because the fruit is more appetizing.

Cereal Flakes with Fruit Juice or Sauce

Method:

1. Toast cereal flakes (such as corn, rice, or wheat) in the oven until they are very crisp.
2. Serve them with pure unthickened fruit juice or with a thickened fruit sauce. (See hot pudding sauce, *Diet for Adults*, page 78.)

Fruit Toast

Method:

1. Toast stale bread until it is crisp and brown (graham or bran bread is often preferable to other breads).
2. Butter toast, and pour over it fruit pulp as thick as heavy cream prepared by stewing, then straining, any of the following fresh, dried, or canned fruits (as a rule, it is advisable to add sugar to the strained pulp, then to stew mixture 1-5 min. before pouring it over the toast):

Apples	Grapes
Apricots	Peaches
Berries (raspberries, etc.)	Plums
Dates	Prunes
Figs (such as black figs)	Etc.

3. Serve toast hot or cold either as a dessert for supper or luncheon or as a breakfast dish (to take the place of cereal and fruit); plain or whipped cream is sometimes added.

Notes:

1. The following are possible additions to the fruit pulp used in this recipe:
Thickening paste (occasionally used; see recipe on page 146 for stewed fruit thickened)
Yolk and white of egg (beaten separately or together)

2. Any one of the following may be substituted for strained fruit pulp in this recipe:

a. A fig paste, made by grinding or chopping dried figs, then stewing them

b. Marmalade prepared from the following ingredients:

Orange rinds (both orange-colored and white parts), ground fine in a food-grinder

Apples, chopped

A small quantity of orange juice and pulp

Sugar (limited quantity)

Orange rinds furnish bulk, hence the recipe is very economical. The recipe is of excellent value in children's diet, being used as a spread for bread, as well as for preparing fruit toast.

c. Raw fruit (for example, sliced oranges with sugar are good served on hot toast)

d. Stewed fruit, unstrained (not for use with very young children)

3. Fruit toasts are often useful for combating constipation, especially in the case of children. (Chopped nuts are occasionally added to the fruit for toasts to be used in diet for adults; pine and other oily nuts are sometimes laxative in their action.)

Stewed Fruit Thickened

Ingredients:

2 t.	1 tb. cold water
$\frac{1}{4}$ t.	$\frac{1}{2}$ -1 tb. cornstarch or arrowroot
2 tb.	1 c. hot stewed fruit (preferably strained), sweetened to taste
$\frac{1}{8}$ t.	1 t. lemon juice
$\frac{1}{4}$ t.	$\frac{1}{2}$ tb. butter

Method:

1. Add the cold water to the starch and stir to make a smooth paste.
2. Add the paste to the hot fruit and stir mixture over the fire until it is thick.
3. Add lemon juice and butter, and remove recipe at once from the fire.

Notes:

1. Beaten egg may be substituted for starch as a thickening agent for the fruit.
2. Sauce made in this way is also good as a filling for sandwiches.

Baked Banana

Method:

1. Remove the skin and the fibers from a banana.
2. Dip the whole banana or lengthwise halves into lemon juice or into a mixture of egg and water (1 beaten egg to $\frac{1}{2}$ c. water).
3. Roll banana in buttered crumbs and place it in a buttered pan.
4. Bake banana in a very hot oven about 10 min., or just until it is soft and the juice begins to flow and the crumbs are brown; do not cook beyond this point, else the banana will be dark, poor in flavor, and tough, owing to loss of juice. If the fruit is not brown at the end of 10 min. in the baking oven, hold it next the broiling flame for a few seconds in order that it may brown.
5. Serve with a fruit sauce such as foamy orange sauce (see recipe on page 147).

Notes:

1. Pupil to supply data for the composition¹ of bananas, edible portion:

	PERCENTAGE	
	Very Ripe	Unripe
Protein
Fat
Starch
Sugar
Mineral matter
Water

2. Unripe bananas contain starch, hence they should not be eaten except in the cooked state. Any banana that is fit to be eaten raw should be so ripe that its skin has turned dark brown or black; this is especially true in the case of children's diet. Really ripe bananas, being chiefly sugar and water, are easily digested. Any banana eaten raw should be well masticated. In general, it is safer to avoid raw bananas with children.

Foamy Orange Sauce

Ingredients:

2 tb.	1 large white of egg, beaten stiff
1 tb.	$\frac{1}{8}$ c. powdered sugar
dash	Grated rind of $\frac{1}{8}$ orange
1 t.	3 tb. orange juice
$\frac{1}{8}$ t.	1 tb. lemon juice

Method:

1. Gradually add sugar to the white of egg and beat about $\frac{1}{2}$ min. with a Dover beater; if the white is large enough, the mixture will stand up with finger-like projections.

2. Fold in the other ingredients. Serve at once. (Why?)

Notes:

1. Blood oranges are attractive for use in this recipe.
2. Foamy orange sauce is simply a meringue flavored with plenty of fruit juice. It is much like thin whipped cream in appearance.

Fruit Rice-Balls

Method:

1. Boil rice 8-15 min., or until it is almost tender.
2. Wring 1-ft. squares of cheesecloth out of hot water, and spread them on separate plates.

¹For many of the data see Pease and Rose, "The Banana as a Food for Children," *American Journal of Diseases of Children*, XIV (November, 1917), 379.

3. In the center of each cloth spread a circle of rice 4" in diameter and $\frac{1}{2}$ " thick.
4. Place 2-3 tb. filling (such as a stewed apricot, or apple or other fruit sauce) in the center of each circle, and draw rice and cloth around the fruit to form balls.
5. Tie tight and steam 10 min.
6. Remove cloths and invert balls on plates, smooth side on top.
7. Serve with a fruit sauce or cream and sugar.

Notes:

1. Recommendations for quantity of rice:
 - a. 3 tb. raw rice for a ball of sufficient size for an ordinary serving.
 - b. 2 tb. raw rice for a class recipe (steam the ball in an 8" square of cheesecloth in a small sieve set in the top of a deep saucepan, such as the top of a double boiler)
2. Possible fillings for rice-balls (some of which are for use in adults' diet only):

Fruit sauce, sweetened to taste (from fresh or dried fruit, such as apricots)

Raw fruit (such as strawberries)

Protein foods (resulting in so-called complete rice-balls):

Cheese	Fish
Egg, hard-cooked (or yolk only)	Meat
Legumes, dried (kidney beans, etc.)	Nuts

Avoid very juicy fillings, especially if the balls are boiled. A filling is not an essential part of a rice-ball; for example, balls made with no filling are good with chicken stew.

3. Possible methods for cooking rice-balls:

Steam: See foregoing method.

Boil: Drop the balls into either boiling water or a stew of fruit or meat. Use raw or partially cooked rice; if raw is used, allow it plenty of space for swelling.

Note the disadvantages of using raw rice:

It is difficult to tell just how much space to leave in bag.

It is difficult to tell when rice is tender.

Fry (for use in adults' diet only; see *Diet for Adults*, page 90, Note 3).

Sunflower Orange

Method:

1. Secure a large orange with a thick skin.
2. Cut the skin of the upper half of the orange into eight radiating sections.
3. Separate each section of skin from the orange, but do not tear it off entirely.
4. Roll back these petals.
5. Slightly separate the orange sections at the top, garnish center with a stuffed date, and serve.

Note:

Various other methods for serving raw oranges are as follows:

- a. Extract juice and serve in a glass cup.
- b. Cut fruit in halves, and serve.
- c. Without peeling the orange, cut across sections at slightly varying angles, thus forming irregular slices (hold each slice in the fingers while eating).

2. If the fruit and starchy material are at all dry, add just enough liquid

to cover the bottom of the baking dish; select the liquid singly or in any suitable combination from the following:

Water
Fruit juice
Milk

3. Spread surface with buttered crumbs and bake pudding in a moderate oven 10-45 min., or until the fruit is tender and the pudding is hot throughout and brown on top.

4. If desired, cover pudding with meringue after it is baked, and brown it in either the baking or broiling oven. (Buttered crumbs are superfluous when meringue is used.)

5. Serve hot or cold as a dessert, with almost any pudding sauce, such as:

Sugar and cream (plain or whipped)
Soft custard
Fruit juice or jelly
Caramel sauce
Hard sauce

Garnish with jelly, if desired.

Notes:

1. Fresh fruits may either be sliced thin or be left whole; for example, peaches and apples (cored and filled with sugar) are good left whole.

2. Brown betty is the name given the pudding when the fruit consists of apples, bread crumbs are used as the only starchy ingredient, and brown sugar or molasses is used as sweetening. Grated cheese is sometimes added; if cheese is used, butter may be omitted. One kind of jellied apples results upon treating brown betty as follows:

- a. Cover, and bake slowly 3 hr.
- b. Chill, and turn from mold.

(Another jellied-apple recipe is made by the use of gelatin.)

Oatmeal betty is made by the substitution of cooked oatmeal for the crumbs of brown betty.

3. By the omission of sugar and spice, scalloped apples (prepared with bread crumbs, noodles, or cereal) may be served in place of a vegetable.

4. Beaten yolk and white of egg, one or both (beaten together or separately), are possible additions. Where eggs are used, either bake the pudding in a very slow oven or serve it without baking. (See tapioca and other custards, *Diet for Invalids*.)

5. Discuss the manufacture of tapioca from cassava.

6. The following points are useful when tapioca is used as the starchy ingredient in this recipe (*c* and *d* apply as well when rice, farina, etc., are used):

- a. Approximately 2 c. cooked tapioca ($\frac{1}{4}$ c. in the class recipe) result when the following are cooked together:

$\frac{1}{4}$ c.	2 c. water
1 tb.	$\frac{1}{2}$ c. dry granulated ("minute") tapioca
dash	$\frac{1}{4}$ t. salt
1 t.	3 tb. sugar

Scald the water, add the other three ingredients (salt and sugar are essential here as well as in the fruit layers later), and cook the mixture in a double boiler 12-20 min., or until the tapioca is clear, that is, the snow-whiteness is gone. Less time is required if direct heat is used, but constant stirring is essential.

The following are possible substitutes for part or all of the water (water is generally used in preparing apples escaloped with tapioca):

Milk (used with dates, etc.)

Cocoa and chocolate (hot beverages)

Fruit juice (color effects of peach, grape, cranberry, etc., juices are effective)

Jelly or jam, diluted with water

The following are possible substitutes for minute tapioca:

Sago: This may be substituted for tapioca in this or any other recipe. If as fine as minute tapioca, it needs no soaking; if it is coarse, soak it $\frac{1}{2}$ -2 hr.

Pearl tapioca (usually cheaper than minute tapioca): Soak $\frac{1}{2}$ -2 hr. in cold water to cover, then drain. For $\frac{1}{2}$ c. dry minute tapioca, substitute $\frac{3}{8}$ c. dry pearl tapioca or $1\frac{1}{2}$ c. pearl tapioca measured after being soaked 2 hr.; drain the latter well before measuring. In the class recipe, substitute 3 tb. pearl tapioca (measured after being soaked over night) for 1 tb. minute tapioca.

b. Buttered crumbs are not desirable on tapioca pudding.

c. Tapioca pudding may be served without being baked, in either of the following ways:

(1) Place fruit (such as cubes of fresh pineapple) in glass cups, add the cooked tapioca, and serve.

(2) Cook tapioca and liquid together 2-10 min. in a double boiler, then add fruit, sugar, and flavorings, cook mixture 5-30 min. in the double boiler until fruit is tender, and serve. (See quick fruit tapioca pudding, page 152.)

Either (1) or (2) will turn from the mold if non-juicy fruit is used and a little less liquid or a little more tapioca is used in the tapioca mixture. Cook the latter until a *stiff* batter is produced, then pour it into molds and chill. Turn from molds, and serve with plain or whipped cream or soft custard.

d. It is well to add strawberries and some other soft fruits to the tapioca after the latter is cold; otherwise the fruit is cooked too much.

Shortcake

Method:

1. Split one of the following, then fill it with crushed raw fruit or cranberry or other fruit sauce:

Plain baking-powder biscuit

Muffin (such as graham)

2. Refit halves of biscuit or muffin and pour fruit over the top.

Blueberry Pudding

Method:

1. Cook blueberries with sugar and a little water until the skins begin to crack.
2. Remove all the crust from a loaf of bread, then slice the loaf.
3. Place a layer of these bread slices in a mold, then add a layer of fruit sauce.
4. Repeat putting in layers of bread and fruit until all of each is used.
5. Put a plate and flat irons over the pudding, and let it stand several hours in the refrigerator.
6. Turn pudding out of mold, slice, and serve with cream and sugar.

Notes:

1. This is a good camp recipe.
2. Experiment in substituting other ingredients for blueberries in this recipe, such as jelly, jam, marmalade, and various other sweets.

Quick Fruit Tapioca Pudding

Ingredients:

(6 servings)

2¼ t.	6 tb. minute tapioca
1 t.	3 tb. sugar
¼ c.	2 c. hot water
dash	¼ t. salt
1-3 t.	⅓-½ c. dried fruit (washed, soaked, and chopped), such as:
	Cherries
	Currants
	Dates
	Figs
	Raisins

Method:

1. Mix all the ingredients and cook them 20 min. in a double boiler, stirring occasionally. Keep the utensil covered as far as possible.
2. Serve the dessert hot with cream and sugar; or pour it into molds wet with cold water, turn pudding out when it is cold and set, and add cream and sugar.

Notes:

1. This recipe may be varied in numerous ways by the use of the fruit, flavorings, and substitutes for tapioca which are listed in the recipe for fruit escaloped with a starchy material, pages 149-151. And, too, milk may be substituted for the water called for in the recipe.
2. This recipe (no eggs) is a simple, inexpensive derivative of tapioca cream (see *Diet for Invalids*).

Grape Apples

Method:

1. Pare and core tart apples, boil them in grape juice until they are tender, then drain them, and place in glass dishes.
2. Boil down the juice to a thick sirup, and pour it over the apples.

SIMPLE GELATIN JELLIES*(Not made on a milk basis)*

In preparing the following and other simple gelatin jellies, use the general method given below:

Orange Gelatin Jelly*(3 servings)***Ingredients:**

$\frac{1}{2}$ t.	$2\frac{1}{2}$ t. granulated gelatin
$\frac{1}{2}$ tb.	$\frac{1}{8}$ c., or 2 tb., cold water (for soaking gelatin)
$3\frac{1}{2}$ tb.	$\frac{7}{8}$ c. boiling water
2 t.	$\frac{1}{4}$ c. sugar
2 t.	$\frac{1}{4}$ c. orange juice
$\frac{3}{4}$ t.	1 tb. lemon juice

Notes:

1. This is an average set of ingredients. It may be used as a basis of comparison for all simple gelatin jellies.

2. The class recipe, if chilled, sets in 30 min. The omission of orange juice and the increase of lemon juice to 1 t. results in a good class recipe for lemon jelly.

Prune Gelatin Jelly*(6 servings)***Ingredients:**

1 t.	2 tb. granulated gelatin
1 tb.	$\frac{1}{3}$ c. cold water (for soaking gelatin)
$\frac{1}{4}$ c.	$1\frac{1}{2}$ c. boiling-hot prune liquor (or a mixture of prune liquor and water)
$1\frac{1}{2}$ tb.	$\frac{3}{4}$ c. sugar
$\frac{1}{2}$ t.	3 tb. lemon juice
1 large prune	1 c. stewed prunes, unsweetened (see Notes 1 and 2)

Notes:

1. $\frac{1}{4}$ lb. dried prunes results in about 1 c. stewed prunes. Stew prunes as follows:

- a. Pick over, wash, and soak dried prunes over night in cold water to cover.
- b. Simmer them in the same water until they are plump and tender.

Peaches, apricots, etc., may be substituted for prunes.

2. Add the stewed prunes to the gelatin mixture (strained or not) just before it is molded; stir occasionally after the dessert is in the mold. Why?

3. Note suggestions as to class recipe:

- a. If plenty of time and ice are available, $\frac{3}{4}$ t. gelatin is sufficient.
- b. Use a custard cup as a mold. If time is limited, use a tin mold. Why?

GENERAL METHOD FOR SIMPLE GELATIN JELLIES

1. Soak gelatin 5–10 min., or until it is soft, in 3 or 4 times as much cold liquid as gelatin; the longer the period of soaking, the more delicate the resultant dessert.

2. Boil remainder of liquid (see Note 2), add soaked gelatin, remove mixture from fire, and stir until the gelatin is dissolved.

3. Dissolve sugar and flavoring in the liquid.
 4. Strain gelatin into molds, cover it, and let it stand in a cold place until it is firm. The gelatin sets more quickly if the following points are observed:
 - a. Tin molds (or certain others) are used in preference to granite. Explain.
 - b. Small, rather than large molds, are used.
 - c. The molds are set in a pan of snow or chopped ice. The gelatin sets especially soon if ice-cream salt and a little water are added to the snow or ice; both these agents help to lower the temperature.
 5. When ready to serve, observe either direction *a* or *b* below, then turn gelatin from the mold:
 - a. Dip a knife into hot water, then slip it around between the jelly and the mold.
 - b. Dip mold in hot water for an instant.
- Serve with part or all of the following:
- Sugar (powdered or granulated)
 - Cream (whipped or not)
 - Fruit (such as strawberries or cherries)

Notes:

1. The average proportion used in simple gelatin jellies is 2 t. granulated gelatin to 1 c. water. Increase the proportion of gelatin under any of the following conditions:
 - a. If an extra proportion of lemon juice or other acid ingredient is used, either in liquid form or in the form of solid fruit.
 - b. If any raw-pineapple juice is used.
 - c. If an especially stiff gelatin is desired.
 - d. If the weather is warm and ice is not available.
 - e. If it is desirable to have the gelatin harden in a very short time.

In other words, the ratio between dry gelatin and total liquid used varies according to the following conditions:

- Acidity of liquid
- Presence or absence of raw-pineapple juice
- Stiffness desired
- Temperature
- Time available

2. The liquid for gelatin jellies (desserts, salads, and stock jellies) consists of one or any suitable combination of the following:

Water (used in part in nearly all gelatins)

Juice of either fresh or cooked fruit, such as:

Apples	Oranges
Blackberries	Pineapple (sirup)
Cherries	Plums
Cranberries (sirup)	Prunes
Currants	Raspberries
Grapes	Rhubarb
Lemons	Etc.

Coffee (for use in adults' diet only, as a rule)

Cream (not whipped)

Milk

Vegetable juice, such as cucumber, mint, or tomato (used only in salads; see gelatin-jelly salads, *Diet for Adults*, pages 160-162).

Meat stock, resulting in either of the following:

Simple meat jelly

Aspic jelly

Etc.

No set ratios for liquids can be stated; thus any of the items listed may constitute a greater or lesser part of the total liquid used. The flavoring, such as fruit juice, often makes up the greater part of the liquid. What is Jello?

3. Possible additions to gelatin jellies include:

Salt (a dash of salt is advisable in the average gelatin dish, especially if nuts are present)

Flavorings (caramel, maple, and occasionally extracts, such as vanilla)

Coloring pastes

Gelatin jellies are molded simple and clear, or any of the following ingredients (singly or in any combination) are folded in just before the jellies set:

Chocolate, melted and cooled

Cream, whipped

Custard, soft

Egg whites, beaten

Macaroons, ground

Marshmallows (cut in quarters)

Nuts, chopped (almonds, etc.)

Fruit, dried or fresh, raw or cooked:

Whole (berries, prunes, etc.)

Sliced (such as bananas and oranges)

Chopped (dates, figs, etc.)

Mashed to a pulp

Seeds of raw pomegranate (pretty color effect)

Does the use of any of these additions change the proportion of gelatin used?

4. The five chief classes of gelatin desserts in general are as follows (this classification is in accordance with the preceding note):

Simple jellies: Not beaten, and usually clear; fruit and nuts are often molded in the jellies.

Simple jellies: Beaten, and usually clear before being beaten. (Air makes the jellies lighter in color and in texture; compare the increase in bulk with the increase in bulk in white-of-egg and gelatin whips.)

Bavarian creams: Simple jellies with whipped cream folded in just before the jellies set. (See rice Bavarian cream, page 113; also see *Diet for Adults*, page 201, Note 5.) (In what way are charlottes related to Bavarian creams? See IV, page 107 of this book.)

Spanish creams: Simple jellies with custards beaten in as the jellies begin to stiffen. (See *Diet for Invalids*, under derivatives of soft custard.)

White-of-egg and gelatin whips: Simple jellies with whites of eggs (beaten or unbeaten) whipped in as the jellies begin to stiffen. Allow one white of egg to each cup of jelly. (See *Diet for Adults*, page 198.)

These desserts are especially useful in children's (and invalids') diets.

Pupil to discuss other gelatin dishes, such as marshmallows and gum drops.

Can so-called vegetable gelatin also be used in the preparation of these desserts and candies? Let the pupil experiment.

5. Shredded and sheet gelatins require a longer period of soaking than granulated gelatin. Why?

6. If desired, mold gelatin jellies in various ways; for example:

a. Mold the jellies in numerous fancy shapes. Orange and other fruit cups and baskets are often attractive as molds.

b. Mold a fruit gelatin in layers, as follows:

(1) Pour a little gelatin into a mold, then add a layer of sliced bananas or other fruit. (Fruit floats on gelatin.)

(2) Chill mixture until it is firm, then add more gelatin (liquid, but not hot); add fruit, and chill.

(3) Repeat putting in alternate layers of gelatin and fruit.

7. The appearance of any gelatin jelly is very much changed if jelly is beaten just before it begins to set. What is the effect?

A good cake filling is made by beating a plain gelatin and then adding a fruit jam.

8. A very pretty garnish effect for puddings, etc., is obtained by forcing any *very stiff* jelly through a potato ricer; this applies to both the following types of jellies:

SWEET	SAVORY
Gelatin jellies (such as coffee or apple)	Meat jellies
Fruit, or pectin, jellies (such as currant)	Aspic jellies
Cornstarch jellies	Mint jellies

9. In school it is a matter of economy to prepare gelatin dishes in cold weather, since then, as a rule, no ice is required.

SIMPLE "VEGETABLE-GELATIN" JELLIES

(Not made on a milk basis)

Lemon Jelly

(6 or 7 servings)

Ingredients:

1 t.	$\frac{1}{4}$ box ($\frac{3}{8}$ c., or 6 tb.) vegetable gelatin
2 tb.	Lukewarm water to cover gelatin well (about 2 c. water)
4 tb.	1 c. boiling water
$1\frac{1}{4}$ tb.	$1\frac{1}{4}$ c. sugar
1 t.	$\frac{1}{8}$ – $\frac{1}{2}$ c. lemon juice
$1\frac{1}{2}$ tb.	$1\frac{1}{2}$ c. cold water

Method:

1. Soak the gelatin 15–20 min. in the lukewarm water.

2. Drain off the water and discard it.

3. Add 1 c. boiling water to the soaked gelatin, cover, and boil mixture 8–10 min., or until it is clear. (In the class recipe boil down the mixture to just 1 tb.)

4. Add the sugar, fruit juice, and cold water, and stir to dissolve the sugar.

5. Strain liquid into molds wet with cold water, and let them stand at room temperature 5–15 min., or until jelly is set.

6. Chill, turn dessert from molds, and serve at once; whipped cream may be added if desired. Beware of turning the dessert from the molds until just before it is served, since the jelly-molds are likely to crack on standing.

Notes:

1. Agar-agar, so-called vegetable gelatin, has a great advantage over gelatin in that it quickly sets at room temperature—that is, in a warm place. Ice is not required.

2. See *Food Economy*, "Comparative Costs of Various Brands of Gelatin," page 212.

Orange Jelly*(4 or 5 servings)***Ingredients:**

1 t.	1/4 box vegetable gelatin
2 tb.	Lukewarm water to cover gelatin
4 tb.	1 c. boiling water
1 1/2 tb.	3/4 c. sugar
1/4 t.	2 tb. lemon juice
1 tb.	1 c. orange juice
1/2 tb.	1/4 c. cold water

Method:

Follow the method given for lemon jelly.

FRUIT-JUICE RECIPES: A SYNOPSIS

The following recipes are useful as a means of giving necessary fruit juice to children (and adults):

Beverages (see Note 3):

Apple water
 Fruitade (such as lemon, lemon-grape, lime, or orange)
 Grape juice (by itself or with egg or soda-water)
 Raspberry vinegar

Frozen dishes:

Ice creams
 Ices
 Sherbets (note high food value of milk sherbets)

Glacé fruits

Jellies, gelatin (orange, peach, prune, etc.)
 Jellies, pectin (currant, grape, etc.)

Puddings in which fruit juice is substituted for part or all of the milk:

Irish-moss mold
 Starchy puddings (such as sago or tapioca, cornstarch, and bread)

Pudding sauces (see Note 4):

Fruit juice (by itself)
 Fruit juice thickened with cornstarch, arrowroot, flour, or rice powder
 Fruit juice with sugar and whipped cream
 Fruit juice with sugar and white of egg beaten stiff
 Soft custard made with yolks of eggs and with orange juice in place of milk

Soups (cherry, orange, etc.)

Toasted cereal flakes, such as corn (use pure or diluted fruit juice as a cream substitute)

Toasts (prune, etc.)

Whips (such as grape whip, or soufflé)

Notes:

1. Foods producing an alkaline ash in the body are essential in the diet, and, strange as it may seem, fruit acids help to preserve the alkalinity of the blood; this is the chief reason for saying that fruit juices possess great dietetic value.

2. Many persons do not enjoy fruit as such, hence note the value of recipes involving the use of fruit juices. Desirable juices, sweetened or unsweetened, and used separately or in any combination, include the following:

- Apple (sweet cider)
- Blackberry
- Cherry
- Currant
- Grape
- Grapefruit
- Orange
- Peach
- Plum
- Prune
- Raspberry
- Strawberry

The juices of all fruits may be used either fresh or canned. (The juices of all fruits may be canned with or without the addition of sugar. See *Food Economy*, pages 22-23, for directions for canning grape and other fruit juices.)

Lemon juice is very useful, but it is so acid that it cannot be used in the same proportions as other fruit juices. The use of a little lemon juice with any other fruit juice helps to develop the flavor of that juice.

3. The juice (pure or diluted) of cherries, strawberries, pineapple, and many other fruits is useful in making fruit beverages.

4. All but the first two items listed under pudding sauces also may be used by themselves as desserts (not sauces). Various desserts over which to pour the fruit sauces include the following:

- Bananas, baked
- Cereal flakes
- Cornstarch mold
- Custard, baked
- Gelatin dishes (such as snow pudding)
- Irish-moss mold
- Junket
- Rice, boiled

SIMPLE CANDIES

(Chiefly homemade)

CLASSIFICATION

I. Candies the chief ingredient of which is sugar or sirup:

Unpulled candies (uncrystallized):

Barley-sugar candies (including glacé fruits and nuts)
Candy brittle (such as peanut or almond)
Butterscotch
Marshmallows (a beaten candy, not a pulled candy)
Toffee
Etc.

Unpulled candies (crystallized):

Rock candy (composed of large sugar crystals)
Lump sugar } Candy substitutes
Maple sugar }

Pulled candies (uncrystallized):

Molasses candy
Taffy (including Meltose taffy; see Note 5)
Etc.

II. Candies (uncrystallized) the chief ingredient of which is not sugar or sirup:

Fruit candies:

Stuffed dried fruits
Fruit-nut paste
Fruit paste and fruit leather

Marzipan (see page 170, Note 9)

Chocolate, sweet, such as milk; a candy substitute (see Note 1)

Etc.

Notes:

1. Simple homemade candies are the best forms of candy for young children; fondant and derivatives are not recommended. Any candies made very rich with nuts, flavorings, etc., are not good for young children. Chocolate is too stimulating for nervous or very young children. (For mention of a non-stimulating chocolate, see page 94, Note 3.) Candies made from browned, or caramelized, sugar do not ferment so easily as other candies and hence on the whole are safer candies for children; note recipe for candy brittle.

2. There is usually greater temptation to eat an excess of expensive commercial candies than of simple homemade ones.

3. The chief dangers in allowing children to spend their pennies for cheap candy lie in the following:

Harmful colorings and flavorings

Disease germs, and other forms of dirt from display counters

One authority asserts that it is the flavorings and dyes which are harmful to children rather than the sugar.

4. In some cases the following candies may be more or less laxative in their action:

Fruit-nut paste

Peanut brittle

Molasses candy

Pop-corn balls

5. Pop-corn balls are a derivative of taffy.

6. A small quantity of pure candy is a good addition to a lunch box.

SUGAR AND SIRUP CANDIES

Barley Sugar

Ingredients:

6 tb.	2 c. sugar
3 tb.	1 c. water
$\frac{1}{2}$ t.	$\frac{1}{8}$ t. cream of tartar
3 d.	Few drops of flavoring (such as lemon extract)

Method:

1. Mix the first three ingredients and stir them until the sugar is dissolved.
2. Boil the solution without stirring until the sirup is light yellow in color, 300°–310° F., or 149°–154.5° C. If desired, wash the sides of the pan during the boiling process, as in making fondant.
3. Add flavoring. Add coloring material if desired.

Notes:

1. The solution begins to turn light yellow at 300°–302° F., or 149°–150° C.
2. Use this barley-sugar sirup in various ways; for example, each of the pupils may be assigned one of the following problems:

- a. Plain drop or pour candies:

Drops (such as lemon, lime, or horehound)

Rounds (pour a thin layer of sirup into oiled muffin tins; cool, and turn out)

Squares (pour a thin layer of sirup into an oiled pan; cool, and mark in squares)

Sticks, strip or cylindrical (such as stick candy)

"All-day suckers" (on skewers)

As a rule all horehound candies and their derivatives are composed of barley sugar.

- b. Glacé fruits and nuts

- c. Spun sugar

Glacé Fruits and Nuts

Method:

1. Prepare any of the following ingredients:

- a. Nut meats (whole):

Almonds (not blanched, as a rule)

Filberts

Brazil nuts

Pecans

Chestnuts (boiled and peeled)

Walnuts

b. Fruits (whole, sliced, or cut in small pieces):

Candied fruit (cherries, pineapple, etc.)

Canned fruit (such as pineapple)

Dried fruit (see Notes 5 and 6):

Dates, figs, or prunes (whole or cut in small pieces)

Raisins (seeded)

Fresh fruit:

Apples, whole, on skewers (see page 162)

Cherries

Grapes, white (such as Malaga)

Orange or grapefruit (in sections)

Pineapple (in cubes)

Strawberries (whole)

Fresh, canned, or stewed fruit should be dried thoroughly on the outside.

Beware of breaking the skins of fresh strawberries, orange sections, etc.

Sometimes it is well not to remove the stems from fresh cherries, strawberries, and grapes.

2. Cook the barley-sugar recipe (page 160) to 310° F., or 154.5° C., or the very first point at which a brittle thread forms. (Sirup "spins" well at this point; see use in spun sugar, as described in any standard cookbook.)

3. Remove saucepan from the fire at once and place it in a basin of boiling water.

4. Working very quickly, and holding the foods by means of any of the following, dip in the nuts and fruits piece by piece:

Hat pin (new) or straight wire

Fork

Knitting needle

Candy-dipper

A wire bent in spoon shape

Stems of cherries, grapes, and strawberries

5. Drain pieces well, and place them upon a lightly oiled platter or tin plate.

6. Keep them in a cool, not a cold place; the candies become cloudy if kept in a cold place. (Why?)

Notes:

1. Glacé fruits are suggested as a means of supplying acid fruits to children who do not like fruit as such. Certain glacé nuts, such as Brazil nuts, are too rich for young children.

2. Prepare glacé candies in dry clear weather, since they are easily affected by the atmosphere. Do not attempt to keep them longer than 2-3 days, at the most; white grapes, oranges, and strawberries should be served within 2-3 hr. after being glacéd.

3. If the sirup hardens, soften it by reheating.

4. If desired, tint the sirup (pink or green, for instance).

5. Soak (and sometimes stew) raisins, prunes, and figs in water until they are plump, then dry and dip them in the glacé sirup.

6. A date or fig is pretty stuffed with one-fourth of an English walnut; stuff a prune with half a nut. Leave each of the three fruits partly open, so that the nut meat is visible.

7. Note the following specific recipe for glacé apples; glacé pears and other fruits may be prepared in a similar way.

Apple Taffies

Ingredients:

1 very small apple	6 pretty medium-sized apples on skewers
3 tb.	Taffy (see Note 3):
2 tb.	1 c. brown sugar
$\frac{1}{2}$ t.	1 c. corn sirup (such as white or brown Karo)
$\frac{1}{4}$ t.	1 tb. vinegar
	1 t. butter or a substitute

Method:

1. Boil the first three taffy ingredients together to the brittle stage in cold water (do not stir after sugar is dissolved), then add the fat.

2. Quickly dip each apple in the hot taffy, then revolve apple in the air for a few seconds until the covering of taffy is smooth and of even thickness.

3. Place apples on an unbuttered tin plate, and let stand until brittle.

Notes:

1. Apple taffies are an economical, wholesome candy, and easily prepared; children enjoy them. (Name other economical glacé products.)

2. Wooden skewers may be secured of a butcher. However, forks serve very well as skewers for use in class.

3. So long as taffy for apples is boiled to the brittle stage (when tested in cold water), one or more of the following changes may be made in the given recipe:

- Substitute white, maple, or other sugar for the brown sugar.
- Substitute any other sirup (such as molasses, honey, or sorghum) for the corn sirup.
- Vary the proportions of sugar and sirup as desired.
- Omit the fat.
- Cook chocolate in the taffy mixture, omitting the vinegar.

Candy Brittle

Ingredients:

4-6 tb.	2 c. granulated sugar
dash	Salt
2 tb.	1 c. of the following, used singly or in any combination:
	Nut meats, chopped or whole, such as:
	Almonds (preferably blanched)
	Peanuts (remove red skins)
	Pecans
	Puffed wheat or rice (heated in oven until crisp)
	Shredded coconut
	Etc.

Method:

1. Place sugar in a steel sautéing pan or a granite pan and stir it constantly over a medium-sized flame until sugar is melted into a clear, light brown sirup, or caramel. (If a thermometer is available, note the high temperature of the sirup.)

2. Remove sirup from the fire at once, stir in the other ingredients, and pour mixture upon an unbuttered tin. (If preferred, place the salt and nuts or other solid ingredients in a tin, and pour the sirup over them.)

3. Let candy stand until it is perfectly cold, then break it into pieces. If desired, mark the candy in squares just before it hardens.

Notes:

1. If preferred, mix $\frac{1}{2}$ c. water with the sugar (2 c.) before it is placed over the fire. (It is easier to prepare brittle in this way, but the candy is somewhat tough in texture.)

2. Furfural,¹ a harmful substance, is formed during the caramelization of sugar. Note the following points regarding candy brittle:

- a. Cane-sugar brittle contains more furfural than brittle made from glucose.
- b. In the case of brittle prepared from part or all cane sugar, a dark brittle contains more furfural than light-colored brittle. (To obtain the light-colored candy, melt the sugar at a low temperature.)

3. Pupil to secure recipes for brittle prepared from various sirups, such as corn or maple sirup or honey.

Butterscotch**Ingredients:**

2 tb.	1 c. corn sirup
2 tb.	1 c. brown sugar
$\frac{1}{2}$ tb.	$\frac{1}{4}$ - $\frac{1}{2}$ c. butter or a substitute (such as corn oil)

Method:

1. Boil a mixture of the three ingredients until a small quantity for testing purposes will crack in cold water.

2. Pour sirup into a buttered tin, and mark it in squares when it is almost hard. Drop the hot sirup in the form of patties, if preferred.

Note:

Chopped nuts may be stirred into the candy before it is poured into the tin.

Meltose Taffy**Ingredients:**

- $\frac{3}{4}$ c. (8 oz.) Meltose
- 2 tb. cream
- $\frac{1}{4}$ t. butter
- 1 t. vanilla or other extract

¹See Plaisance and Monsch, "A Suggestion in Regard to the Preparation and Use of Caramel," *Journal of Home Economics*, April, 1917.

Method:

1. Boil the first three ingredients together 15–20 min., or until the brittle stage in cold water is reached; stir constantly toward the last.
2. Add the extract, and pour the candy into a greased tin.
3. Cool the candy, then pull it the same as common taffy.

Marshmallows**Ingredients:***(40–50 marshmallows)*

1 t.	3 tb. granulated gelatin (Knox or any other brand)
2 tb.	7 tb. cold water
5 tb.+1 t.	2 c. granulated sugar (see Note 4)
1 tb.+1 t.	8 tb. hot water
6 d.	1 t. flavoring extract (such as peppermint, wintergreen, or almond; or vanilla and lemon, half and half)

Method:

1. Soak the gelatin 3–5 min. in the cold water.
2. Boil the sugar and hot water to the *first* "hairing" stage, that is, until a silken hair $\frac{1}{4}$ " long can be pulled from the end of spoon by means of the finger tip; *do not wait* for the hair to drop of itself.
3. Add hot sirup to soaked gelatin, and stir to dissolve the gelatin.
4. Beat the mixture vigorously for 20 min. (using a wire or Dover egg-beater at first, later a spoon), then flavor it. At the last, the mixture should appear like cake batter or the heaviest of boiled frostings, and should be beaten and stretched up to the setting time (namely, the time when mixture drops, not flows). The longer the mixture is beaten, the whiter and lighter with air it is made.
5. Cover bottom of an oblong cake tin with $\frac{1}{16}$ " sifted powdered sugar.
6. Pour sirup into the cake tin and sprinkle it with a $\frac{1}{16}$ " layer of sifted powdered sugar.
7. Chill candy until it is firm, then turn it out on a board and cut it with a sharp paring knife into perfect 1" cubes.

Notes:

1. Marshmallows are a cheap candy and bulky. They are made by beating air and water-soaked gelatin into hot sugar sirup. (*Experiment:* In making a large quantity of candy, beat it by means of a cake-mixer.)
2. Use non-acidulated gelatin in this recipe, not the acidulated, since the latter results in candy that is too strongly flavored, even when no extract is added.
3. Sugar for covering marshmallows should be treated as follows
 - a. Rolled until velvety and fine, then sifted.
 - b. Placed in cake tin before the sugar sirup is put on the fire.
4. If desired, substitute corn sirup (in like quantity) for part or all of the sugar in the given marshmallow recipe; boil the candy to the same hairing stage. (For temperature suggestions on the use of part or all glucose in candies in general, see table quoted from Amy Daniels by Stewart, *Diet for Adults*, pages 99–100.)

Possible additions to the given recipe for marshmallows include:

- a. Chocolate (beat 4 tb. melted bitter chocolate into the large recipe just before it is poured into the cake tin; use 1 t. melted chocolate in the class recipe)
- b. Nuts (beat these into the candy just before it is molded)
- c. Coloring pastes (such as dainty pink or green)
If desired, mold the candy in layers or in marble effect, using white, chocolate, pink, and other colors.

After-dinner mints may be made in either of the following ways:

- (1) Prepare small marshmallows, light green in color and flavored with mint.
- (2) Prepare small white marshmallows, flavored with mint, and dip them into light green fondant.

5. Marshmallows may be dipped in sweet chocolate, melted and cooled. Beware of the use of bitter chocolate or of any sweet chocolate other than that made for the confectioner for dipping purposes.

6. The given recipe (marshmallow mixture, or paste) may be used in any of the following ways:

- a. Candy (toasted marshmallows are especially good)
- b. Addition to fruit salad (cut marshmallows in small cubes)
- c. Garnish for a cracker (place a marshmallow on a cracker, brown it in the oven, then add a nut meat)
- d. Garnish for cocoa, in place of whipped cream (add to cocoa either a marshmallow or a little of the soft paste)
- e. Garnish for ice cream (pour marshmallow paste as a sauce over ice cream)
- f. Cake filling or frosting (cheap, and much used by bakers) is made in either of the following ways:
 - (1) Melt marshmallows in a double boiler, adding a little water, if necessary, then add this paste to boiled frosting and beat well.
 - (2) Melt marshmallows in the hot sirup as completed for boiled frosting, then add this sirup to the beaten white of egg and whip hard. Add nuts, if desired.

Marshmallow pudding is similar to the recipe for marshmallows. Snow pudding is also somewhat related.

7. Pupil to observe the following directions in work with the class recipe:

- a. Bring a candy box from home.
- b. In case 90 min. only are allowed for the lesson, pupil is to work very busily.
- c. Use great care in measuring all ingredients (take full measurements of water, dipping them from a bowl rather than measuring them from a faucet).
- d. Aim to make tender candy. (If the lesson period is short and there is no objection to candy which is somewhat tough, use 1-1½ tb. only of cold water.)
- e. Boil the sirup until a hair ¼" long (but no longer) can be formed. Pupil is likely to cook the sirup too long.
- f. Allow 20 min. for the beating of mixture. (The candy should thicken very gradually; it will not be white and fluffy if it stiffens before the end of a

20-min. period of beating.) Use a Dover beater, or perhaps a wire beater, until mixture is very thick, then use a wooden spoon and long strokes. Note the following emergency cases:

- (1) If candy sets before it is very white, set the bowl in hot water just long enough to melt the candy, then beat again.
 - (2) If candy does not stiffen in 20 min., heat it 2-5 min. over hot water, then beat again.
- g. Very quickly add the flavoring and coloring and pour the candy into a bread tin $5'' \times 2\frac{1}{2}''$ (speed and care are essential toward the last of the 20-min. beating period, else the candy is likely to lump). The candy will harden without ice on a cool day, but ice hastens the setting process.

8. The pupil may, for purposes of economy, make only one-half the class recipe; but the class recipe as written is the more satisfactory.

FRUIT AND NUT CANDIES

Fruit candies have a great advantage over sugar candies in that they contain valuable mineral salts.

Fruit-Nut Paste

(*Sugarless sweets*)

Ingredients:

1 date	1 c. dates, stoned
1 t.	1 c. of some other dried fruit, such as:
	Apricots
	Figs
	Prunes, stoned
	Raisins, seeded
1 t.	1 c. chopped nut meats, such as:
	Almonds, blanched
	Brazil nuts
	English walnuts
	Pecans
	Pine nuts
dash	Pinch of salt
to cover	Coating material for candies (see step 5)

Method:

1. If the fruit is very dry, make it soft and pliable by submitting it to one or both of the following steps (dates, as a rule, require neither soaking nor cooking):
 - a. Soak the fruit until it is plump.
 - b. Steam or stew the fruit until it is tender and plump (occasionally it is well to stew the fruit to a stiff, dry pulp or marmalade).
2. Drain the fruit, and dry its surface very thoroughly with a soft cloth.
3. Thoroughly mix the first four ingredients of the recipe, and grind them in a food-grinder to a velvety paste.

4. Shape this stiff paste into any of the following forms:

Balls, $\frac{1}{2}$ " in diameter

Cubes, or caramels (cut from paste rolled to a sheet of $\frac{3}{4}$ " thickness)

Cylinders ("sausages"), small

Cylinders, large (sliced later)

Strips

5. Roll the candies in any of the following materials, and place them on paraffin paper:

Cereal flakes, coarsely ground (such as corn flakes)

Chocolate (melted in a double boiler; see Note 4)

Coconut, finely shredded or chopped (it is often desirable to brown dried coconut in an oven)

Fondant of any tint, melted in a double boiler (bonbons result)

Macaroons, ground

Sugar, granulated (red, white, blue, etc.)

Sugar, powdered

6. If desired, wrap each candy in paraffin paper.

7. Serve the candies at once, or pack them in tin boxes and store them in a cool place. All the candies keep well. Caramels pack especially well.

Notes:

1. If preferred, pack the paste in glass jars, and make it into candies just before the time for serving them.

2. The fruit and nuts for use in the class recipe should be measured after they are ground.

Caution: Grind the materials, do not chop them; it is tedious to chop them to a paste, and is often impossible.

3. Fruit-nut paste prepared from the following ingredients is especially rich in iron:

1 c. figs (pulled) or prunes

1 c. almonds, blanched (such as Jordan)

4. Use coating chocolate, that is, a special sweetened chocolate used by confectioners for dipping purposes. Avoid bitter chocolate or common sweet chocolate. After dipping candies, let them stand until the chocolate is hard, then wrap them in paper.

5. Possible additions to fruit-nut paste include the following:

Cereal flakes, toasted (such as corn, wheat, or rice flakes)

Corn sirup

Honey

Lemon juice

Senna leaves, ground to a coarse powder (see Note 6)

Cereal flakes are especially desirable if, by chance, the fruit-nut mixture is too soft to handle; add the flakes and knead mixture to make a stiff dough. (Use 1 tb. flakes in the class recipe.)

6. As a rule, all dried-fruit candies (such as stuffed fruits and fruit-nut paste) are laxative in effect, but those containing senna leaves are especially laxative. Two pieces of candy made from the following mixture may be eaten each night for their laxative effect:

$\frac{1}{2}$ lb. each of dates, figs, prunes, and raisins

$\frac{1}{4}$ lb. senna leaves

7. Any fruit-nut candy mixture is excellent as a filling for children's sandwiches.

Fruit Paste¹

Ingredients:

1 lb. strained fruit pulp, secured from one or any combination of the following:

Apples	Gooseberries	Quinces
Apricots	Guavas	Raspberries
Cherries	Peaches	Strawberries
Currants	Plums	Etc.

1 lb. powdered sugar (use only $\frac{3}{4}$ lb. in the case of apples, guavas, or peaches)

Optional ingredients to taste (such as coloring paste and chopped nuts, preserved citron, or candied orange peel)

Method:

1. Using a low flame, cook a mixture of the pulp and sugar until almost dry.
2. Add any of the optional ingredients desired.
3. Spread the mixture in a $\frac{1}{2}$ " layer upon oiled platters, cover with cheese-cloth, and let dry 2-3 days in a breezy place.
4. Cut paste in 1" squares, roll them in granulated sugar, let stand 2-3 days longer, then pack them in tin boxes, using heavy paraffin paper between layers.
5. Serve the paste either as a confection or as a garnish for fruit relishes, cakes, sweet sandwiches, etc.

Notes:

1. This recipe is practically the same as fruit butter, *Food Economy*, pages 32-33, except for slight differences in sugar, etc., and for the fact that fruit paste is drier than fruit butter.
2. A fruit candy somewhat similar to fruit paste may be prepared as follows:

a. Simmer the following ingredients together until a clear, thick paste results:

1 c. raisins	} chopped
$\frac{1}{2}$ c. figs	
$\frac{1}{2}$ c. apricots	
1 c. corn sirup (such as Karo)	

b. Pour candy upon greased plates, let it stand until cold and firm, then cut it into cubes or strips.

Fruit Leather

Method:

1. Mash any very ripe raw fruit (or a mixture of fruits) to a smooth pulp; for example:

Berries (strawberries, etc.)	Figs
Cherries (stoned)	Peaches, apricots, and blue plums (peeled and stoned)

2. Spread pulp in a thin layer on lightly oiled platters, and dry it in a drier or by means of sunshine or an electric fan.

3. Roll dried pulp on the order of a jelly roll, then cut roll in crosswise slices.

¹ Adapted very largely from Ola Powell, *Successful Canning and Preserving*, pages 170-171.

4. Pack the slices in glass jars, or in very tight boxes lined with paraffin paper.
5. Use the leather in any of the following ways:
 - Use it dry as a confection (see note).
 - Use it dry, with cream cheese and nuts, as a dessert.
 - Use water-soaked leather for pie filling or for jelly or sauce for shortcake.

Note:

If the leather is to be used as a confection, it is well to sprinkle the sheet with powdered sugar before it is rolled.

Stuffed Dried Fruits

Method:

1. Soak one or more kinds of dried fruits—cherries, dates, figs (preferably pulled), or prunes—in water until semi-plump, then dry surface of the fruits.
2. Stone the cherries, dates, and prunes, and stuff them with chopped nuts.
3. Roll the fruit in granulated or powdered sugar.

Note:

If dates are not to be used as candy, cream cheese may be mixed with the nuts; in this case do not roll dates in sugar.

Candied Orange Straws

Method:

1. Wash oranges, and remove the rinds in quarters.
2. Cover the rinds with cold water, and boil them 45 min., or until they are very tender, changing the water two to four times during the boiling (disagreeable or harmful flavor is removed in this way).
3. Drain the rinds, and scrape off part of the white lining by means of a spoon.
4. Cut the rinds with scissors or a paring knife into straws or strips of regular shape and size or into irregular wormlike straws—preferably long, narrow ones.
5. Boil the following ingredients together to make a sirup as thick as cream (the class recipe is sufficient for 2 h. tb. orange straws):

3 tb.	2 c. sugar
2 tb.	1 c. water, hot or cold

6. Add straws to sirup, and with constant stirring simmer them until "transparent" and sirup is evaporated almost to dryness, or is in a sugared state.
7. Drain the straws, roll them immediately in granulated sugar, and let them dry on paraffin paper before serving.

Notes:

1. If preferred, remove part of white lining from uncooked rinds, cut rinds into straws, then boil them tender.
2. Fresh or dried rinds of oranges, grapefruit, or other citrous fruit may be used in this recipe for candied fruit straws.
3. The white lining of the rind of citrous fruits is not poisonous. Because of its pectin content it is useful in the preparation of marmalades, but since it lacks flavor, it is useless in the preparation of candied rinds except for its bulk.
4. Fruit straws are an economical candy.

Marzipan¹

Ingredients:

Almond paste, commercial (sold by confectioners)

Flavorings to taste:

Confectioners' XXXX sugar (use about $\frac{3}{4}$ lb. sugar to 1 lb. average commercial almond paste)

Rose water or orange-flower water (bought of druggist)

Boiled water, cold or hot, enough to make a stiff dough that can be kneaded easily (see Note 1)

Coloring paste (optional), such as pink, yellow, or green

Method:

1. Knead together on a marble slab or molding board all the ingredients (including coloring paste, if used) to make a very smooth dough. If necessary, sprinkle a little XXXX sugar on the slab or board to keep the dough from sticking.

2. Mold the dough with the hands (or roll it out, and cut) into attractive forms, such as vegetable forms (beets, carrots, potatoes, etc.), fruit forms (apples, bananas, cherries, pears, strawberries, etc.), flower forms (roses, etc.), animal forms (turkeys, etc.), bread rolls (twists, etc.), balls, rings, stars, hearts, small cylindrical sticks (wrapped in tinfoil), large cylindrical sticks (sliced before serving).

3. Decorate the forms in various ways; for example:

Tint surface of forms with coloring pastes (use small brushes).

Roll potato forms in a mixture of cocoa (or cinnamon) and powdered sugar.

Attach artificial stems and leaves to certain of the forms (shredded coconut may be used as potato sprouts).

Place small pieces of candied pineapple, etc., on top of candies.

Notes:

1. Any water added to commercial almond paste in the preparation of marzipan must be sterile (boiled), else the candies will mold. Unbeaten white of egg is occasionally added to almond paste in place of water, but the marzipan does not keep for any length of time. It is not always necessary to add moistening material to commercial almond paste.

2. As a rule, no heat is applied during the process of making marzipan from commercial almond paste. However, with some few candy forms, particularly bread rolls, it is desirable to hold the candies (placed on a paper sprinkled with a little granulated sugar) next the open flame of a grill for a few seconds only, or just long enough to brown them. In some cases a baking oven, if extremely hot, may be substituted for the grill. If marzipan is baked too long it becomes spongy and is similar to macaroons.

3. A marble slab is preferable to a molding board in the preparation of marzipan. Cleanliness of the slab, hands, etc., is essential.

4. Both almond paste and marzipan paste (flavored, but not molded candy) will keep for months if stored in air-tight tin boxes.

5. Marzipan is popular at Christmas time. It makes a good handwork candy lesson.

6. Almonds are very rich in iron, one of the essentials for growth in children.

7. A candy somewhat similar to marzipan is made by the substitution of finely ground coconut for the almond paste of marzipan.

¹ Many of the points in this recipe are by courtesy of L. G. Kunze, Chicago.

MEAT AND FISH FOR PARTIES

Optional lessons

Fillet of Beef

Method:

1. Remove the fat and membrane from a whole tenderloin muscle of beef (3-6 lb.); the butcher will usually perform this process on request.
2. Lard the muscle with strips of fat salt pork cut the long way of the rind and soaked in ice water. (See Note 2 for directions for applying the lardoons.)
3. Roast the meat, allowing, on an average, $1\frac{1}{2}$ hr. (Follow "General Method for Oven-roasted Meat," *Diet for Adults*, pages 26-28.) If a tenderloin of extra good flavor is desired, roast it in a bed of vegetables.
4. Prepare a brown gravy from the drippings in the pan.
5. Garnish the roast with any of the following:
 - a. Mashed potato pressed through a pastry bag (potato roses, etc., as described on page 84, are especially desirable)
 - b. Vegetables cut in any of the following forms and then boiled (these may be fried for use in adults' diet):
 - Balls (made with a French cutter)
 - Cups (made by scooping vegetables so that they will stand erect, and then filling with other vegetables)
 - Curls (made with twirlers; see Note 1)
 - Lattices
 - Shoestrings
 - Stamps

Notes:

1. As a rule, a whole potato or other vegetable must be used for every vegetable curl. Cut open the vegetable (its entire length) before removing the curl.
2. (This note applies to all roasted and braised meats.) If meat is lean and dry (beef fillet is such a meat), add to it fat pork, either fresh or salted, cut in $\frac{1}{4}$ " strips, or lardoons. The lardoons may be applied in any of the following ways:
 - a. Lay them on top of the meat.
 - b. Tie them on top of the meat.
 - c. Sew them into the top surface of meat by means of a larding needle, taking one stitch with each lardoon; if a needle is not available, make holes in the meat with a sharp knife and push the lardoons through.

Planked Beefsteak

Method:

1. Clean a sirloin steak 2" thick by means of a damp cloth.
2. Pan-broil meat 10 min.

3. Slightly butter a plank, then, using a pastry bag, place a border of mashed potatoes around the edge.

4. At intervals on top of border place eight to ten nests of mashed potatoes.

5. Place steak in center of plank, and bake the whole until the steak is done and the potatoes are brown.

6. Fill potato nests with hot seasoned peas, and place slices of broiled tomatoes at even intervals about the steak.

Crown of Lamb

Method:

1. Secure 6-8 prime chops from either side of a lamb or a yearling mutton; keep the ribs attached to one another in one long strip.

2. French the chops, making the length uniform.

3. Draw the chops backward in such a way as to form a circle, then tie and skewer them into shape.

4. Roast chops the same as any other meat (see *Diet for Adults*, pages 26-28), allowing $1\frac{1}{4}$ - $1\frac{1}{2}$ hr. for roasting. Protect ends of bones by wrapping them in flour paste or cheesecloth, or covering them with cubes of fat salt pork.

5. Remove the roast to a hot platter, and fill center of roast with mashed potatoes, carrots, cress, mint, or other food material.

6. Garnish the roast with radishes, parsley, and white paper frills for the tips of bones.

Notes:

1. The scraped part of bones should be up in pan and also on the platter.
2. For suggestions for use in adults' diet, see Appendix G, page 214, Note 4.

Creamed Oysters in Toast Boxes

Ingredients:

2 oysters	1 c. oysters
	1 c. thick white sauce (see Note 1):
3 tb.	1 c. milk or cream
1 t.	3 tb. flour
1 t.	2 tb. butter
dash	Salt
dash	Paprika
1 box	Toast boxes

Method:

1. Add the oysters to the white sauce, and heat the mixture in a double boiler until the gills of the oysters curl.

2. Pour mixture into toast boxes and garnish them with paprika and parsley.

Notes:

1. Cook the white sauce very thoroughly, using the dietetic method (see *Food Economy*, pages 70-71).

2. See *Food Economy*, pages 64-65, for use of toast boxes with protein foods in general.

APPENDIX



APPENDIX

PART A. PENNY AND OTHER LUNCHROOMS FOR SCHOOL CHILDREN

Introductory Notes

1. School authorities the world over are coming to realize that hungry children are not in a condition to derive much benefit from their school work; hence we are learning the value of school lunchrooms, the aim of which is to furnish an inexpensive means of supplying good, wholesome food for those who need it. It is only by keeping the body properly nourished that we can possibly hope to gain the maximum results with the young, especially those who are more or less physically and mentally defective. "It seems fair to place the probable number of seriously underfed school children in New York and other American cities at 10 per cent of the school population."¹

The lunchrooms (very often the penny type) are a vital factor in open-air schools. Open-air schools are desirable for all children, sick or well, but are especially necessary for children suffering from diseases which involve malnutrition; for example, malnutrition proper, anæmia, nervousness, and tuberculosis.

2. The following-named publications give valuable information on penny and other school lunchrooms:

Committee on School Lunches of the Home and School League, Philadelphia,
Annual Reports.

Bryant, Louise S., *School Feeding: Its History and Practice at Home and Abroad.*

Rose, Mary Swartz, *Feeding the Family*, pages 153-157.

Hunt, Caroline L., "School Lunches," *Farmers' Bulletin 712*, U.S. Department
of Agriculture.

Wile, Ira S., "School Lunch Progress in New York," *Journal of Home Economics*,
December, 1914.

Small, Mary E. L., "Elementary School Lunches under School Department
Direction, Buffalo, N.Y.," *Journal of Home Economics*, December, 1912.

Bailey, Pearl L., *Domestic Science, Principles and Application.*

3. An exercise for the pupil follows these introductory notes. The foods listed in the left-hand column of the table are grouped as follows:

- I. Foods valued chiefly for protein content
- II. Foods valued chiefly for starch, sugar, or fat (that is, energy-yielding foods)
- III. So-called complete foods, that is, dishes containing a fair balance of protein, carbohydrates, and fats (For general suggestions and for recipes for most of the dishes listed, see *Food Economy*, pages 43-104, 113-116, 129, Note 2.)

The asterisk denotes those dishes which, in normal times, are among those likely to prove desirable, from standpoints of cost and food value, for the penny lunchrooms provided for underfed and other children.

¹Louise S. Bryant, *School Feeding: Its History and Practice at Home and Abroad* (1914 ed.), page 204.

Let the pupil supply data for the right-hand columns of table, relying upon the experience of the lunchroom manager, discussion of market prices, and actual cooking tests (in some cases, the cooking classes may prepare certain foods for the lunchroom).

Pupil, as desired, to make additions to, or deductions from, the list; for example, remove all foods which may be indigestible or are in any way extravagant as to money or time.

Let the pupil specify in some way which dishes are particularly suitable for children of different ages, such as the high-school age.

COMPARATIVE PRICES OF FOODS FOR LUNCHROOMS FOR SCHOOL CHILDREN

FOODS	QUANTITY IN AN ORDINARY SERVING	\$0.01 (OR LESS) PER SERVING	\$0.02 PER SERVING	\$0.03 PER SERVING	\$0.05 (OR MORE) PER SERVING
I. PROTEIN FOODS					
*Cheese, cottage.....					
*Cocoa.....					
*Custard, baked.....					
*Custard ice cream.....					
*Custard pudding, baked, such as:					
Bread pudding.....					
Rice pudding.....					
Indian pudding.....					
*Custard, soft (floating island, etc.).....					
Hamburg steak.....					
*Legumes, dried, boiled, or baked (beans, peas, etc.).....					
Meat, sliced (hot or cold).....					
*Milk.....					
*Milk, malted (plain and its de- rivatives).....					
Nuts (filberts, English walnuts, etc.).....					
*Soups, cream, such as:					
Asparagus.....					
Cabbage.....					
Celery.....					
Potato.....					
Spinach.....					
Tomato.....					
*Soups, dried-legume, such as:					
Bean, pea, or lentil.....					
Peanut butter.....					

**COMPARATIVE PRICES OF FOODS FOR LUNCHROOMS FOR
SCHOOL CHILDREN—Continued**

FOODS	QUANTITY IN AN ORDINARY SERVING	\$0.01 (OR LESS) PER SERVING	\$0.02 PER SERVING	\$0.03 PER SERVING	\$0.05 (OR MORE) PER SERVING
II. CARBOHYDRATE AND FATTY FOODS					
*Breadstuffs (bread, toast, rolls, biscuits, or crackers)					
Cakes (ginger, sponge, cup, jelly roll, etc.)	1 slice				
*Candies, simple, such as:					
Apple taffy	1				
Chocolate, sweet					
Dried fruit, stuffed					
Fruit-nut paste					
Marshmallows	4				
Molasses kisses	4				
Charlotte russe					
*Cookies (molasses, etc.)	1 or 2				
*Fruits, cooked, such as:					
Apple or pear, baked					
Apple or pear, stewed					
Fruit butter (apple, etc.)					
Prunes or raisins, stewed					
*Fruits, raw, such as:					
Apple	1				
Banana	1				
Dates	6				
Figs	3				
Grapes	1 bunch				
Orange	1				
Raisins	12				
Pop-corn ball	1				
*Rice, macaroni, or noodles with tomato sauce					
Salad, such as:					
Banana					
Cabbage					
Potato					
Tomato					
*Sandwiches, sweet (jam, jelly, fig, date, prune, etc.)					
*Vegetables, such as:					
Carrots					
Potato (white or sweet), baked or mashed	1 baked				

**COMPARATIVE PRICES OF FOODS FOR LUNCHROOMS FOR
SCHOOL CHILDREN—Continued**

III. COMPLETE DISHES					
*Bread and butter or gravy.....					
*Whole milk and one of the follow- ing:					
Bread or toast.....					
Cereal, cooked (oatmeal, rice, etc.).....					
Cereal, ready-to-eat (corn flakes, shredded wheat biscuits, etc.)..					
Crackers.....					
*Sweet chocolate and crackers (such as graham).....					
Stuffed juicy vegetables (tomato, etc.).....					
Stuffed starchy vegetables (mashed-potato cups, etc.)...					
*Creamed protein foods on toast (dried beef, etc.).....					
Complete escalloped dishes (macaroni and cheese, etc.)...					
Complete-dish balls, sautéed....					
Complete-dish croquettes.....					
Complete-dish hashes.....					
Complete-dish loaves.....					
Complete-dish pies.....					
Complete-dish rice-balls (see page 148, Note 2).....					
Complete-dish salads (see <i>Diet for Adults</i> , pages 177-179)...					
*Complete-dish sandwiches, hot ..					
*Complete-dish sandwiches, cold..					
*Complete-dish stews:					
Fish (whitefish, clam, oyster, etc.).....					
Meat (beef stew with dumplings or rice, etc.).....					
Dried-legume.....					
Complete-dish turnovers (from biscuit dough).....					

Notes:

1. A roll is often served with (that is, included in the order for) each of the following:

Beans, baked
 Complete dish, such as hash
 Creamed dish, such as:
 Creamed protein food on toast
 Creamed vegetable
 Rice, macaroni, or noodles, with tomato sauce
 Custard pudding (rice, etc.)
 Milk
 Salad
 Soup (such as broth or cream soup)
 Stew
 Vegetable

Any of the following breadstuffs are possible substitutes for toast or bread in the preparation of either creamed protein foods on toast or of hot and cold sandwiches:

Biscuits
 Crackers (such as graham)
 Rolls

- Cones are often sold as containers for foods, such as:

Beans, baked
 Ice cream
 Potato, sweet, mashed
 Pudding

2. Note absence of tea, coffee, and pies from the list of foods given in the table.

Recipes containing raw vegetables, such as cabbage salad, should not be offered to children under 10 years of age.

3. Pupils often give excellent service at lunchroom counters. It is sometimes feasible for the cooking classes to provide certain foods for selling in lunchrooms.

4. In many schools, high schools in particular, the lunch periods are too short to permit proper eating. A half-hour lunch period does not allow for the proper mastication of foods or for the relaxation desirable from the standpoint of digestion.

5. Let the pupil plan well-balanced 15-cent menus from the foods listed in the table, pages 176 to 178. Note the following tabulation, which is quoted from Louise S. Bryant, *School Feeding*, page 249:

Comparative Food Value of Lunches Purchased by Children

	FRANK- FURTERS AND ROLL	BANANA AND LICORICE	SWISS CHEESE AND BREAD	FROSTED CAKES
Protein.....	5	0.6	12	8
Fat.....	6	....	7	19
Carbohydrates.....	9	24.4	46	76
Total grams.....	20	25.0	65	103
Total calories.....	110	108.0	295	507
Cost.....	\$0.01	\$0.01	\$0.02	\$0.03

The following graphic representation of the relative value of school and street lunches is taken from the 1913 report of the Committee on School Lunches of the Home and School League of Philadelphia:

Relative Food Value of School and Street Lunches



"The left-hand column represents the food value of a penny portion bought at school when a charge of one-quarter of a cent is made for service. The right-hand column shows the food value of the amount purchased for a cent from the street vendor, who makes all he can on the deal.

"At school the amount of food value given for one cent is always as high as possible. In the street the child can buy something which is not food at all, like licorice."

6. At one time the following weekly menu was typical of the dishes served in a certain penny lunchroom. Pupil to discuss the prices to-day of the various dishes:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Baked beans	Rice pudding	Vegetable soup	Succotash	Cream-of-tomato soup
Milk	Milk	Milk	Milk	Milk
Crackers	Crackers	Crackers	Crackers	Crackers
Fruit	Fruit	Fruit	Fruit	Fruit
Sweet chocolate	Ice cream	Sweet chocolate	Ice cream	Sweet chocolate
	Chocolate	Cocoa	Chocolate	

A roll was included in an order for baked beans, vegetable soup, cream-of-tomato soup, or succotash.

In the high school the luncheon may offer more variety, but the emphasis should still be on simple, nourishing foods. The daily list¹ may well include:

Soup (such as tomato, green-pea, split-pea, white-bean, and black-bean)

Two or three hot dishes (such as spaghetti with tomato sauce, mashed potatoes with green peas, baked beans, corn pudding, a stew, or hot roast-beef sandwich)

Salads (such as potato, egg, fruit, or green-vegetable)

Sandwiches (one or two varieties each day)

Fruit (such as apples, bananas, and stewed fruits of various kinds)

Milk and cocoa

Plain cake or sweet wafers (offered only in combination with milk or other plain food)

Ice cream, charlôtte russe, simple baked pudding, sweet chocolate

¹Adapted from Mary Swartz Rose, "Food for School Boys and Girls," *Technical Education Bulletin 23*, Teachers College, Columbia University.

PART B. BETWEEN-MEAL LUNCHES FOR NORMAL CHILDREN

Any one of the following foods (not more than one, as a rule) is often served as a between-meal lunch (at 10:00 A.M. or 4:00 P.M.) to a school child. The asterisk denotes foods which are also permissible, as a rule, for a very young child, that is, a child just under school age (under 5 years):

- Bread, stale (with or without butter)
- Broth, hot
- Buttermilk (very fresh)
- Cocoa
- *Crackers, Educator
- *Crackers, graham
- Egg lemonade (see Note 3)
- *Foods partially dextrinized, such as:
 - Bread crumbs, toasted
 - Bread crusts, dry
 - Cereals, ready-to-eat (toasted corn flakes, etc.)
 - Corn, parched
 - Pretzels
 - Pulled bread
 - Toast, dry (hot or cold)
 - Zwieback
- Fruit, fresh, raw, and mild (apples, in particular)
- Fruit juice, mild (such as grape)
- Milk
- Milk and any of the following foods:
 - Bread
 - Cereal, cooked (such as cracked wheat)
 - Crackers, hard (such as graham or Educator)
 - Foods partially dextrinized (any of those listed above)

Notes:

1. Between-meal lunches are often a necessity in the home and school, especially with little children; they are often sold in the penny lunchrooms. A school child who has had breakfast early is likely to become exhausted before time for the noon meal; this exhaustion may result in stupidity, restlessness, or irritability on the part of the child. A between-meal lunch in this case is a necessity.

Sometimes, in addition to the 10:00 A.M. and 4:00 P.M. lunches, a lunch during the night is advisable for a child under school age; in such a case those foods indicated by the asterisk in the foregoing list are usually the best foods to be given.

2. The best foods for between-meal lunches possess one or more of the following characteristics: they should be

Hard (so as to promote mastication)

Warm or hot

Light, simple, and easily digested

Not too tempting (that is, they should have little sweetness or other flavor)

3. Note points in regard to between-meal lunches for every age of child:

a. If given, they should be given regularly.

b. They should be given only when the *child regularly shows hunger between stated meals*. (If a young child is hungry enough in the night or at any other time to nibble at a dry crust, he will gain only benefit from thus eating between meals.)

. The lunches, especially those for a younger child, should be subject to a physician's approval.

The younger the child, the more vital it is that foods served between meals should possess one or more of the foregoing qualities; for example, note that the foods advocated for the child under school age are hard; and, too, partially dextrinized foods (being partially predigested) are very desirable. Fruit juices require no digestion. It is probable that no more easily digested food can be prepared than egg lemonade (see recipe, *Diet for Invalids*); sometimes it may even be given to a child under school age.

4. The foods listed below should not be taken between meals by children (or adults). This is either because these foods require so much time for digestion that the stomach is not empty when regular meal time comes and so appetite for the right kinds of foods is lost, or because they quickly satisfy the appetite (as in the case of candy), thus robbing the body of the right kind of foods.

Cake

Candy

Jam or jelly sandwiches

Meat (sandwiches, etc.)

Nuts (peanuts, etc.)

Pie

Pudding

Etc.

Sweet chocolate, light cream soups, and certain egg dishes (eggnogs, etc.) are occasionally allowable between meals.

5. This outline does not advocate the bad habit of nibbling between meals. Between-meal lunches are simply extra meals served at *regular* intervals during the day.

6. In a general way this outline applies to between-meal lunches for adult invalids.

PART C. DIGESTION¹

Let the pupil supply data for the following tables:

Four Main Parts of the Digestive Tract

PART OF TRACT	REACTION (Acid or alkaline)	SECRECTIONS	CHIEF ENZYME ACTION
Mouth.....
Stomach.....
Small intestine.....
Large intestine.....

Digestive Juices

DIGESTIVE JUICE	ORGAN SECRETING THE JUICE	REACTION (ACID OR ALKALINE) OF JUICE	ENZYMES PRESENT	NUTRIENTS CHIEFLY ACTED UPON BY ENZYMES	PRODUCTS OF ENZYME ACTION
Salivary.....
Gastric.....
Pancreatic.....
Intestinal.....

Carbohydrate-splitting Enzymes

DIGESTIVE ORGAN	SECRETION	ENZYMES	PRODUCTS OF ENZYME ACTION
STARCH			
Mouth.....
Stomach.....
Small intestine.....
SUGAR			
Mouth.....
Stomach.....
Small intestine.....

¹A course in high-school physiology is a prerequisite for this work on digestion.

Fat-splitting Enzymes

DIGESTIVE ORGAN	SECRETION	ENZYMES	PRODUCTS OF ENZYME ACTION
Mouth.....
Stomach.....
Small intestine...

Proteolytic Enzymes (Acting on Proteins)

DIGESTIVE ORGAN	SECRETION	ENZYMES	PRODUCTS OF ENZYME ACTION
Mouth.....
Stomach.....
Small intestine...

Steps of Digestion Listed in Their Natural Sequence

Data are supplied for the protein column; let the pupil supply the lists of steps in the digestion of fat, starch, and sugar.

	PROTEIN	FAT	STARCH	SUGAR
1.	Acid albumin .....	.....	.....	.....
2.	Proteose .....	.....	.....	.....
3.	Peptone .....	.....	.....	.....
4.	.....	.....	.....	.....

Absorption of Food Nutrients

NUTRIENTS	WHERE ABSORBED	IN WHAT FORM ABSORBED	IF STORED, WHERE
Protein.....
Fat.....
Carbohydrates...
Water.....
Mineral matter...

PART D. PERCENTAGE COMPOSITION DIAGRAMS OF FOODS

Introductory Notes

1. These diagrams (pages 187-199) are a pupil problem adapted from a series of colored charts, *Composition of Food Materials*, prepared by C. F. Langworthy, United States Department of Agriculture.

2. *References for use by the pupil:*

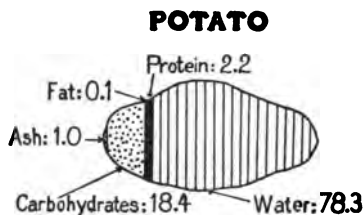
Langworthy, *Composition of Food Materials*, U.S. Dept. of Agri., Office of Experiment Stations.

Bulletin 28, "The Chemical Composition of American Food Materials," U.S. Dept. of Agri., Office of Experiment Stations.

Locke, *Food Values*.

3. *Problem for the pupil:* (1) Supply figures for the percentage column accompanying each diagram; (2) designate on the diagram, in accordance with these figures, the percentage composition of each food, using either of the following schemes:

a. Lines and dots in one or more colors of ink; for example:



b. Colored spaces arranged in the following sequence (place the space for water at the top of the diagram, as a rule):

White: Water

Pink: Protein

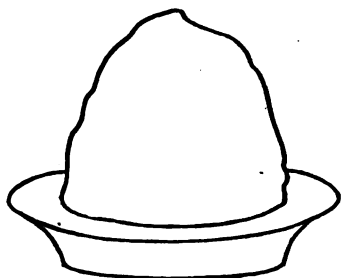
Yellow: Fat

Blue: Carbohydrates

Black: Ash

Let the pupil describe her key (patterned after one of the above schemes) in the space below. Vary the color scheme of *b* as desired, and use either crayons or water colors.

PERCENTAGE COMPOSITION DIAGRAMS



Oat Breakfast Food

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

Oat



	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

Rye

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



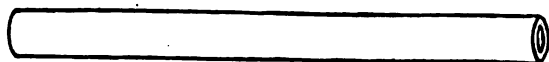
Rice

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



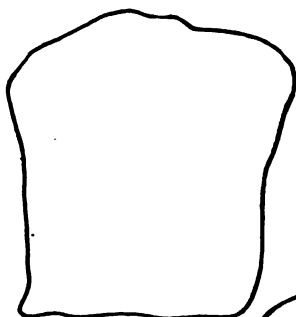
Macaroni

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

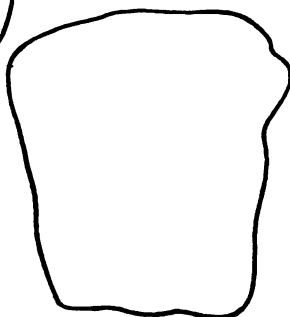


PERCENTAGE COMPOSITION DIAGRAMS

White Bread

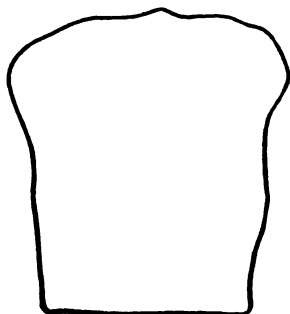


	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



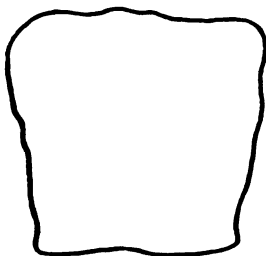
Whole Wheat

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Toasted Bread

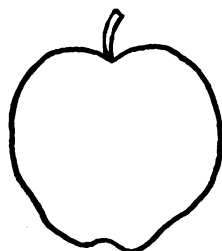
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Corn Bread

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

PERCENTAGE COMPOSITION DIAGRAMS



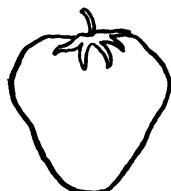
Apple

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



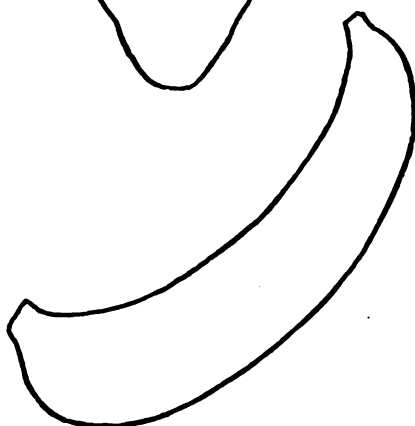
Fig(dried)

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Strawberry

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

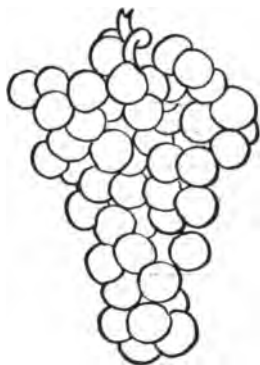


Banana

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

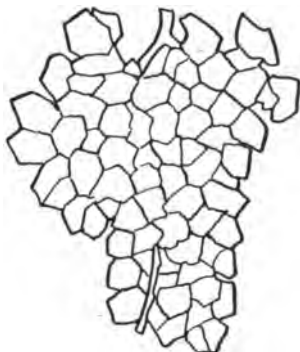
PERCENTAGE COMPOSITION DIAGRAMS

Grapes



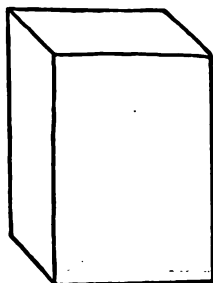
	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----

Raisins



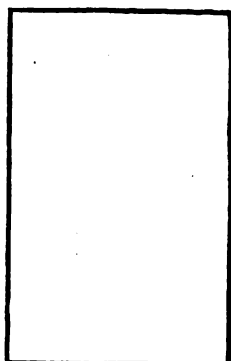
	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----

Cocoanut Desiccated



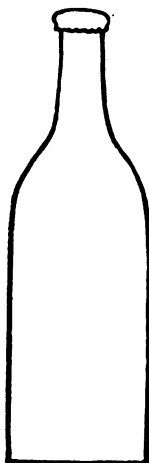
	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----

PERCENTAGE COMPOSITION DIAGRAMS



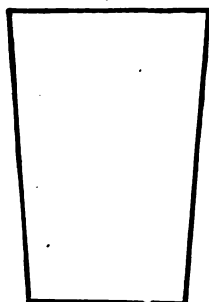
Canned Fruit

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Grape Juice

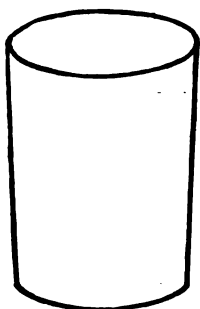
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Jelly

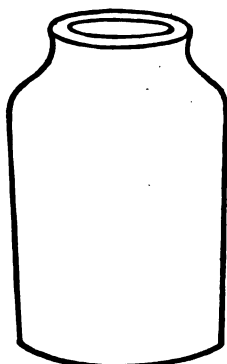
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

PERCENTAGE COMPOSITION DIAGRAMS



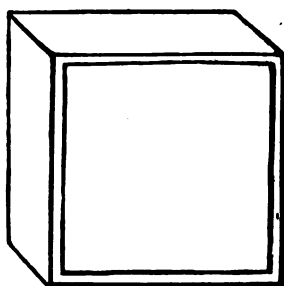
Sugar

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Molasses

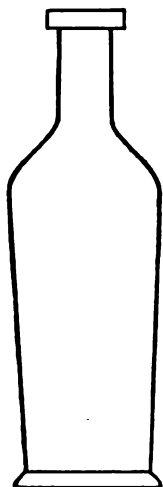
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Honey

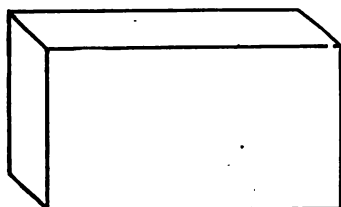
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

PERCENTAGE COMPOSITION DIAGRAMS



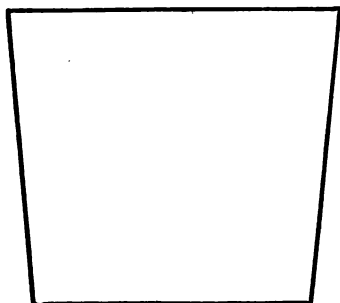
Olive Oil

	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----



Butter

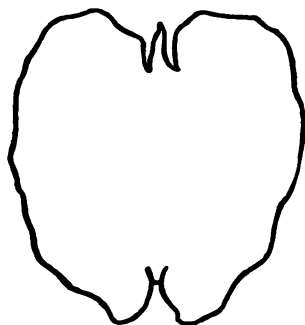
	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----



Lard

	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----

PERCENTAGE COMPOSITION DIAGRAMS



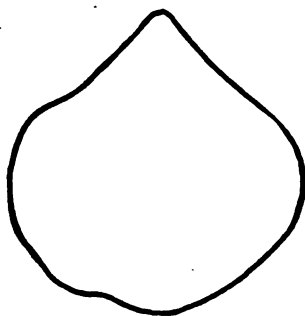
Walnut

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



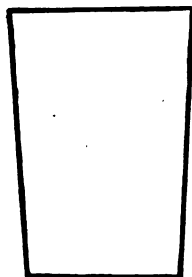
Peanut

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Chestnut

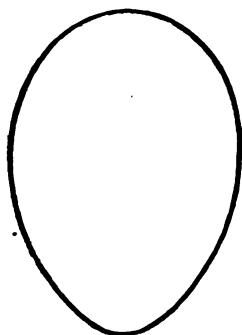
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Peanut Butter

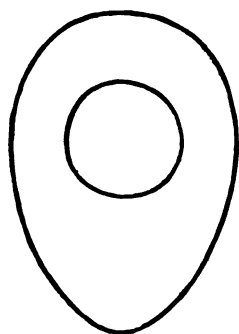
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

PERCENTAGE COMPOSITION DIAGRAMS



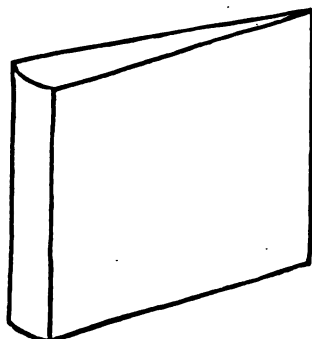
Whole Egg

	%
Water	---
Protein	---
Fat	---
Carbohyd.	---
Ash	---



Egg
White and Yolk

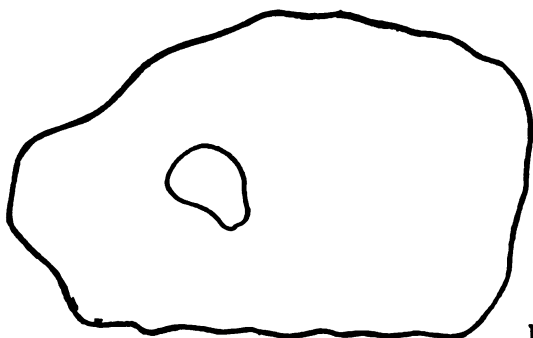
	%
Water	---
Protein	---
Fat	---
Carbohyd.	---
Ash	---



Cream Cheese

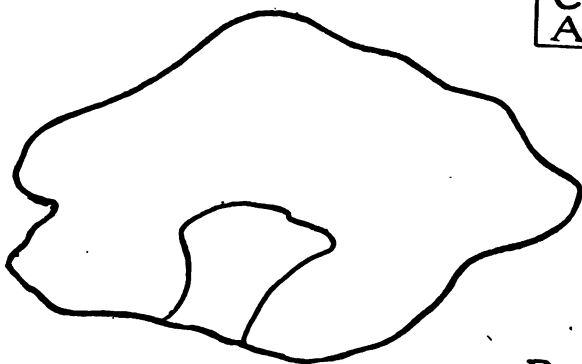
	%
Water	---
Protein	---
Fat	---
Carbohyd.	---
Ash	---

PERCENTAGE COMPOSITION DIAGRAMS



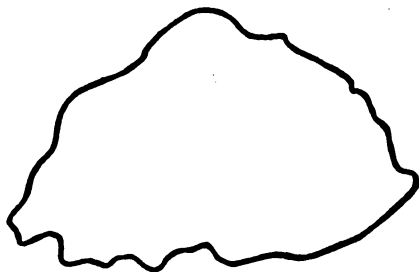
Smoked Ham

	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Beef Steak

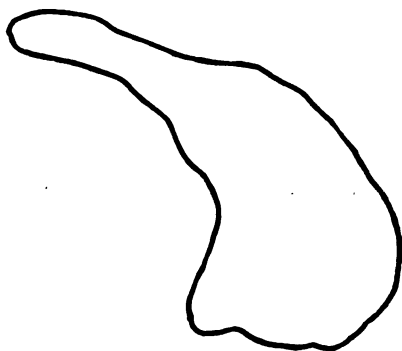
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Dried Beef

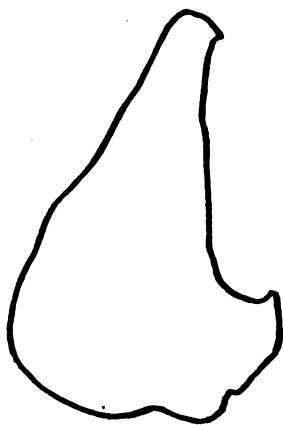
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

PERCENTAGE COMPOSITION DIAGRAMS



Lamb Chop

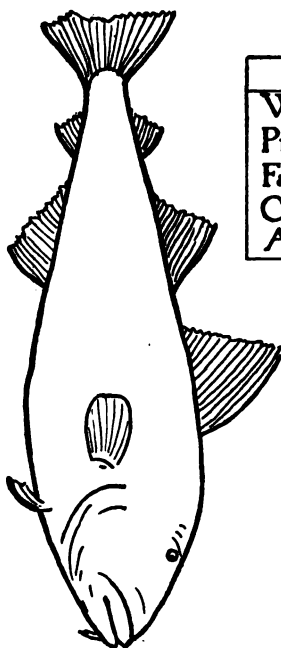
	%
Water	---
Protein	---
Fat	---
Carbohyd.	---
Ash	---



Pork Chop

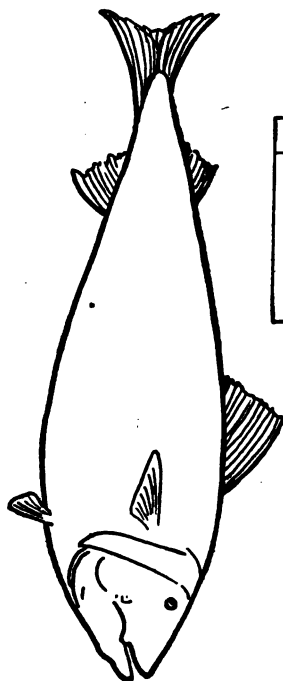
	%
Water	---
Protein	---
Fat	---
Carbohyd.	---
Ash	---

PERCENTAGE COMPOSITION DIAGRAMS



Cod

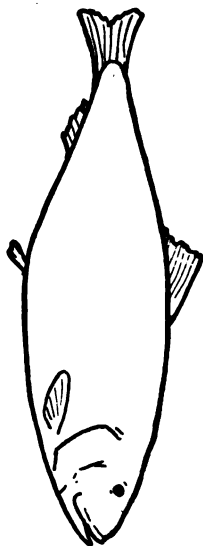
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----



Mackerel

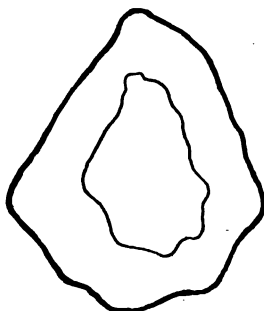
	%
Water	-----
Protein	-----
Fat	-----
Carbohyd.	-----
Ash	-----

PERCENTAGE COMPOSITION DIAGRAMS



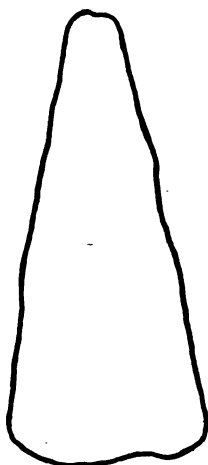
Smoked Herring

	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----



Oyster

	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----



Salt Cod

	%
Water	----
Protein	----
Fat	----
Carbohyd.	----
Ash	----

PART E. MISCELLANEOUS AIDS TO THE STUDY OF THE COMPOSITION OF FOODS

CLASSIFICATION OF PLANT PRODUCTS ACCORDING TO THE PARTS (BOTANICAL) USED AS FOOD

Pupil to enter the following plant products, also others, in the proper columns of the table below:

Arrowroot
Artichokes, globe, or French
Artichokes, Jerusalem
Asparagus
Beans, string
Beets
Broccoli
Cabbages
Capers
Carrots

Cauliflower
Celery
Cinnamon
Cloves
Coffee
Cucumbers
Dasheens
Ginger
Ginger-root
Irish moss

Lettuce
Mace
Mustard
Onions
Parsnips
Peas
Potatoes
Pumpkin
Rhubarb
Sage

Sago
Spinach
Squash
Sugar
Tapioca
Tea
Tomatoes
Turnips
Walnuts
Wheat

SEED PODS	SEEDS		COVERING OF SEEDS
	Cereals:		
	Legumes:		
	Spices:		
FLOWER BUDS (Unexpanded)	FLOWERS OR FLOWER STALKS	FRUIT	JUICES OF PLANT
		Whole fruit (in- cluding nuts):	
		Rinds:	
LEAVES	TUBERS AND TUBEROUS ROOTS	FLESHY SUCCULENT ROOTS	BULBS
Fresh:			
Dried:			
LEAF STALKS	STEMS	TRUNKS	BARK OF TREE

LOCATION OF STARCH IN VEGETABLE FOODS

Pupil to supply data for the table below, in each column naming several foods rich in starch, if any exist. If desired, use the iodine test for starch.

Cereals	SEEDS		FRUITS	LEAVES
	Legumes	Nuts		

ROOTS	TUBERS	BULBS	STEMS	TRUNK

LOCATION OF FAT IN VARIOUS FOODS

Let the pupil supply data for the table below, in each column naming several foods rich in fat.

Vegetable kingdom:

FRUITS	SEEDS		
	Cereals	Legumes	Nuts

Animal kingdom:

MEATS	FISH	DAIRY PRODUCTS AND EGGS

PART F. EXPERIMENTS: COMPOSITION OF FOODS

EXPERIMENT: TO TEST FOODS FOR STARCH

Iodine is used to detect the presence of starch in foods. When iodine is added to foods, colors result as follows, according to the quantity of starch present:

Blackish or dark blue.....Much starch
 Pale blue or greenish.....Little starch
 Brown, orange, or yellowish.....No starch

In general, the test is more satisfactory if foods are soaked and then boiled and cooled before being tested with iodine. This is particularly true with carbohydrate foods, in which the stiff cellulose is likely to prevent contact with the iodine. (What can you say as to the solubility of starch in cold water? Why boil many foods before testing them for starch?)

In testing chocolate, cocoa, and other foods of high color, each is cooked to a paste, then a little of the paste is spread on white paper and iodine is added.

Pupil problem:

- Test the foods belonging to each of the following groups I, II, and III.
- Record results in the accompanying tables by means of the following scheme:

++ = much starch
 + = little starch
 - = no starch

Group I (seeds and nuts):

Soak the seeds and nuts, then cut each seed or nut in two and apply a drop or two of iodine solution.

If no color reaction is secured in this way, grind the seed or nut to a powder, boil it in 1 or 2 cc. water, and test again with iodine.

FOOD	QUANTITY OF STARCH	FOOD	QUANTITY OF STARCH
Barley.....		Peanuts.....	
Beans.....		Rice.....	
Brazil nuts.....		Rye.....	
Corn.....		Wheat.....	
Oats.....			

Group II:

Soak each food in cold water to cover.

Shake or rub well, then pour a little of the water covering the food into a tt., and boil.

Cool, and add a drop or two of iodine.

FOOD	QUANTITY OF STARCH	FOOD	QUANTITY OF STARCH
Arrowroot.....	Gelatin.....	.....
Cellulose.....	Oatmeal.....	.....
Cocoa.....	Potato.....	.....
Corn meal.....	Sago.....	.....
Flaked wheat.....	Tapioca.....	.....
Flour.....		

Group III:

Add iodine to each food. (Soaking and cooking previous to the test are to a large extent nonessential with this group. It is not necessary even to add water to some foods.)

FOOD	QUANTITY OF STARCH	FOOD	QUANTITY OF STARCH
Apple.....	Milk (dried or	
Bread.....	evaporated) ..	.....
Cabbage.....	Onion.....	.....
Carrot.....	Salt.....	.....
Fish.....	Sugar.....	.....
Lard.....	Turnip.....	.....
Meat (test veal or		White of egg.....	.....
other light meat)		

Notes:

1. Test malt, malted milk, and proprietary infant foods.
2. List animal foods, if any, which contain starch. Define glycogen.
3. Test paper with iodine. Test cloth with iodine.

Make an iodine spot on a cloth and then "wash" it out with cornstarch (or flour) and water.

**EXPERIMENT: TO DETERMINE THE PRESENCE OF FAT IN FOODS BY
MEANS OF THE "GREASE-SPOT" TEST**

Control test:

- a. Place a drop of water on unglazed paper.
 - b. Place a drop of oil or butter on unglazed paper.
 - c. Note spots made by each. Note that the characteristic spot made by the fat is translucent and permanent.
1. Apply some of the following foods to small slips of unglazed paper:
- Beans, cooked (navy, soy, etc.)
 - Butter, dairy
 - Butter, peanut
 - Cellulose (from celery or other food)
 - Chocolate and cocoa
 - Cornstarch
 - Egg yolk
 - Fat meats (such as beef suet)
 - Flour (buckwheat, white, etc.)
 - Fruits (apple, etc.)
 - Lard
 - Meals (corn, oat, etc.)
 - Meat, lean
 - Milk
 - Nuts (Brazil nuts, peanuts, etc.)
 - Olives, green and black
 - Sugar
 - Vegetables (potatoes, etc.)
 - Etc.
2. Dry the slips of paper and hold them to the light.
3. Check on the foregoing list (see 1) the names of all foods that make translucent, permanent spots on paper; that is, those which contain fat.
4. Label the slips of paper and mount them in notebooks.

Notes:

1. As a rule, it is sufficient to crush a food and rub it on the paper.

Sometimes, however, it is well to place the food on paper, let it stand a minute, then remove it from paper.

In some cases it is necessary to heat the crushed foods in order to extract the fat. Place the foods on little slips of paper, and spread the slips (labeled) on a shallow pan. Let them stand $\frac{1}{2}$ hr. in a hot oven, avoiding a heat sufficient to scorch the paper.

Unglazed paper, such as one of the following, is better than glazed:

- Blotting paper
- Filter paper
- Letter paper
- Wrapping paper (meat paper, etc.)

**EXPERIMENT: TO DETERMINE THE PRESENCE OF FAT IN FOODS BY
MEANS OF A FAT SOLVENT**

PROCESS	OBSERVATION AND CONCLUSION
Place about $\frac{1}{2}$ " of each of the following foods in a separate tt. (all solid foods to be finely chopped). Cover each food with carbon tetrachloride (a fat-solvent). Label the tt., shake well, stopper, and let stand 10-20 min. or longer, then observe.	
Brazil nuts
Corn meal
Egg yolk
Flour
Milk, whole
Oatmeal
Peanuts
Rind of orange, lemon, etc.
Tallow
Wheat germs or whole wheat

Notes:

1. The finer the nuts and other solid foods are ground, the quicker the results. Why? A mortar and pestle are very useful.

2. Carbon tetrachloride is not inflammable. *Benzine and ether are fat-solvents which are very inflammable; neither should be used by the pupil in this experiment.* If either is used by the instructor, the entire experiment should be carried on away from flames and high heat.

3. If desired, pour the extracts of egg yolk and other foods upon dry paper filters. Is the characteristic "fat grease-spot" formed in each case? Compare with paper filters upon which no extract has been poured.

4. Very satisfactory results are secured by the following procedure:

- Place dried egg yolk and ground peanuts in separate glass graduate cylinders.
- Cover them with carbon tetrachloride, stopper, shake, and let stand all night. Note results. In the case of the egg yolk note color of carbon tetrachloride when the mixture has stood until the residue is white.

5. If desired, the instructor may perform the following experiment:

- Secure the ether extract of egg yolk by means of either a filter or a pipette.
- Place this extract in a shallow dish, and evaporate it in a cool draft until no odor of ether remains; *avoid heat or a flame.* Note the appearance and odor of the oil remaining.

**EXPERIMENT: TO DETERMINE THE PRESENCE OF PROTEIN BY MEANS
OF THE COLD NITRIC-ACID TEST (Heller's test)**

Control test:

PROCESS	RESULT
1. Place in a tt. 1-2 cc. strong nitric acid. 2. By means of a fine-pointed pipette carefully allow a small quantity of a very dilute solution of egg albumin to flow gently down the side of the tt. and to float on top of the acid.	A characteristic white ring forms between the acid and the albumin.

Application of test:

PROCESS	OBSERVATION AND CONCLUSION
1. In each of four tt. place 1-2 cc. strong nitric acid. 2. By means of a fine-pointed pipette carefully allow a small quantity of each of the following liquids to flow gently down the sides of the four tt., respectively, and to float on top of the acid: <ul style="list-style-type: none"> Acid albumin in acid solution..... Gelatin in water solution..... Proteose in water solution Peptone in water solution..... Note whether or not the typical ring is formed in each tt.	

Notes:

1. The same test is used to detect protein (albumin) in urine. What is the nature of Bright's disease?

2. Place a drop of strong nitric acid upon each of the following, and heat (state results):

- Small piece of lean meat
- Soaked pea
- Soaked bean
- Dried milk
- Piece of gelatin

3. All the bodies of the protein group are turned yellow by the addition of concentrated nitric acid, the color being intensified by boiling. Cool, and *cautiously* add a little alkali, such as ammonia. What happens?

4. Explain results upon placing a drop of strong nitric acid on a finger tip. Of what material is the human body partly composed?

**EXPERIMENT: TO STUDY, BY MEANS OF DRY HEAT, THE GENERAL
POINTS OF DIFFERENCE BETWEEN THE COMPOSITION OF PROTEIN
AND THE COMPOSITION OF OTHER FOODSTUFFS**

PROCESS	OBSERVATION AND CONCLUSION
1. Hold (or suspend) in turn over a Bunsen flame four teaspoons containing the following:	
Lean meat, beans, or other protein food	
Sugar (such as granulated)	
Starch (such as cornstarch)	
Fat (such as lard)	
2. Note effect upon each of the above of the first gentle heat applied.....	
Note odor of burnt feather, characteristic of burning or scorching protein (this <i>odor test</i> is one way of distinguishing protein from other foodstuffs).....	
To what element in protein is this characteristic odor due?.....	
3. Note effect of later heat. Which is the first foodstuff to catch fire when the spoons are thrust directly into the fire?.....	
Note danger of exposing a pan of fat to flames....	
Why is it difficult to broil over a direct flame an oily fish or a very fat piece of meat?.....	
Place corn meal and yolk of egg in a direct flame.	
Do they blaze quickly or not, and if so, why?.....	
What can you say as to the comparative fuel value of fats, carbohydrates, and proteins?.....	
4. Does each of the foodstuffs finally reach the black, or carbon, state? That is, are they all organic foods?.....	
Note at this point the characteristic odor of burning fats. Note the irritating effect of the fumes upon the eyes. To what is this irritation due?	
5. Continue the application of heat. Is mineral matter, or ash, left in any of the teaspoons?.....	

EXPERIMENT: TO SHOW THAT WATER IS PRESENT IN MOST FOODS

PROCESS	OBSERVATION AND CONCLUSION
1. Place in turn pieces of lettuce, apple, and other fresh vegetables and fruits on an old tin plate.....	
2. Cover the food with a cold jelly glass or fruit jar. (Why use a cold jar?).....	
3. Place apparatus over a low flame and note results on the sides of the jar.....	

Notes:

1. Test meat and various other foods in like manner. Each pupil should test a total of two or three animal or vegetable foods.
2. Explain presence of moisture on the outside of a glass of ice water on a hot day.
3. Open a hot baked potato and hold it next to a cold glass. What is the result?
4. Define the term "condensation of moisture."

EXPERIMENT: TO DETECT ACID, ALKALINE, AND NEUTRAL FOODS

Test each of the following foods with red and blue litmus paper moistened with distilled water, then record the name of the food in one of the columns given below (in the case of a solid food, be sure that it is either dissolved in distilled water or is well moistened; the most satisfactory way is to dip pieces of red and blue litmus paper into distilled-water solutions):

Apple juice
Baking powder
Baking soda
Buttermilk
Butter, rancid
Butter, fresh
Coffee (beverage)
Cream of tartar

Cucumbers
Egg white
Fish
Fruits, ripe
Fruits, unripe
Lemon juice
Milk, sour
Milk, sweet

Molasses
Raisins
Salt
Suet, beef
Sugar, brown
Sugar, white
Tea
Tomato juice
Vinegar

ACID	ALKALINE	NEUTRAL

Notes:

1. Taste each of the foods in the list on the foregoing page, then check the names of all sour-tasting foods.

2. The following substances may also be tested with litmus paper:

Other foods than those listed on the foregoing page

Saliva

Household cleansers, such as:

Ammonia water

Borax

Soap, various kinds (such as Ivory and washing soap)

Tooth powders and washes

Washing powders and washing liquids in general

Washing soda

Water, tap

Wood ashes

PART G: RECIPE VARIATIONS FOR ADULTS' DIET

This section of the Appendix is given simply by way of correlation. The housewife, in preparing meals for adults as well as for children, may find these suggestions useful.

CREAM SOUPS

CLASSIFICATION

I. Soups prepared from succulent, or juicy, vegetables (that is, vegetables containing much water and little or no starch; see Note 3):

Non-acid vegetables:

*Asparagus	Mushrooms
Cabbage	Okra
*Carrots	Onions
*Cauliflower	*Peas (fresh green)
*Celery (roots, leaves, or stalks)	*Spinach
Corn	Turnips
Lettuce	Etc.

Acid vegetables:

Sorrel	} (the only members of this group)
Tomatoes	

II. Soups prepared from starchy foods:

- *Starchy vegetables (potatoes, etc.; see page 61)
- Chestnuts (see Note 4, a, b)
- *Bread (yielding bread soup)
- *Cereals (yielding cereal soups; see Note 4, c)

III. Soups prepared from protein foods (such soups are meat substitutes and are often served as the chief course of a luncheon or supper):

- Cheese, American
- Cheese,¹ cottage
- Fish (salmon, oyster, etc.)
- *Legumes (beans, peas, etc.)
- Meat and poultry
- Nuts (almond butter, etc.)
- Etc.

Notes:

1. The cream soups marked with an asterisk are among those especially useful in children's diet.

2. Cream soups are very nutritious—more nutritious than most meat-stock soups. Because so rich in food value, they should not precede a heavy dinner; rather, they should

¹See recipe for cottage-cheese soup, "Cottage-Cheese Dishes," *Circular 109*, U.S. Department of Agriculture.

be served as the first course of a luncheon or supper. The soup, if very nutritious and if served with toast or other breadstuff, may constitute the entire luncheon or supper; a cream soup is often used in this way in children's or invalids' diet. A cream soup, if very thin, is sometimes served at dinner.

3. Juicy (succulent, or flavor) vegetables, most of which may be used in cream soup, include the following (some of these vegetables, especially those marked with an asterisk, may be used in children's soups):

a. Succulent, or juicy, roots and tubers:

Artichokes, Jerusalem

Beets

Bulbs, most of which are used simply as condiments or flavoring:

Chives

Garlic

Leeks

Shallots

*Carrots

Celeriac

Horse-radish (used as seasoning)

Kohlrabi (a relative of the cabbage and turnip)

*Onions

Parsnips (frost sweetens these)

Radishes (served chiefly as a relish)

Rutabagas

*Salsify, or vegetable oyster (of sweet flavor similar to that of the parsnip)

Turnips, white or yellow

Succulent roots and tubers contain sugar, etc., in solution, and, as a general rule, they contain a larger proportion of water than the starchy roots and tubers.

b. Succulent vegetables—not roots and tubers (these include most of the vegetables which wilt very quickly, such as herbaceous or green vegetables):

Artichokes, French or Globe

*Asparagus

Bamboo sprouts, Chinese

*Beans (such as lima and string)

*Cabbage family:

Brussels sprouts

Cabbage

Cauliflower

Celery-cabbage

*Celery

*Corn, green

Cucumbers

Eggplant

Greens, cultivated:

Chard, Swiss

Dashoen, leaves of

Ka

Lettuce

*Spinach

Turnip and beet tops

Greens, weeds used as (a source of economy):

Dandelion

Sorrel

Mushrooms

Okra

*Peas, green

Peppers, sweet (green or red)

Salad plants (green leaves, stalks, and shoots are used):

Chicory

Endive

Lettuce

Sorrel

Watercress

Squash, summer

*Tomatoes

Truffles

Udo, a Japanese stalk, used in the same ways as asparagus; for example in:

Cream soup

Cream toast

Salad

Vegetable marrow (similar to summer squash)

Succulent vegetables in general are rich in mineral matter as well as in sugar. (Note that plenty of mineral matter is essential in the diet.) Pupil to differentiate succulent vegetables from starchy vegetables by means of the iodine test for starch.

Since most members of Groups *a* and *b* of vegetables (page 211) contain no starch, a thicker white sauce is required for juicy-vegetable soup than for starchy-vegetable soup.

4. Possible substitutes for vegetable pulp in the general recipe for starchy-vegetable cream soup, page 60, include the following:

a. Pulp of roasted chestnuts

b. Pulp obtained as follows from boiled chestnuts:

(1) Shell and blanch chestnuts.

(2) Cover nuts with stock or water, boil them until tender, and press them through a sieve.

c. A thin cooked cereal, such as farina or cream of wheat. Just before serving such a cereal soup, add the following ingredients and heat mixture in a double boiler until the cheese is melted:

1 yolk of egg, beaten

1-2 tb. grated cheese

Bread soaked in milk is a possible substitute for the cooked cereal.

The desirability of chestnut or cheese soup for children is questioned.

5. In preparing cream soups add any of the following seasonings to taste (occasionally the milder of these seasonings are allowable in children's diet):

Bay leaf

Beef extract (good in corn soup)

Butter (extra)

Celery salt

Cloves (with tomato soup)

Mace (sometimes added to cheese soup)

Onion salt or onion juice

Pepper (white pepper, paprika, etc.)

Sugar (with tomato soup, etc.)

Tomato juice

Vegetables, finely chopped:

Carrots

Celery stalk or root

Onions

Parsley

Peppers, sweet green

Paprika lends an attractive color to many soups.

Add the chopped vegetables (except parsley) in either of the following ways:

a. Add vegetables to milk, cook mixture in a double boiler 10-30 min., then strain the milk, and make white sauce from it.

b. Cook vegetables, *without browning* them, in a little fat, then cook them in soup 3-10 min. Strain soup before serving. (Bacon fat, Crisco, etc., burn less easily than butter.)

The flavor of one or more of the chopped vegetables is often desirable in cheese soup; use method *a*, above.

The seasoning of potato and other starchy soups is very important; as a rule, several of the above seasonings are used.

6. Possible garnishes for cream soups in general include the following (in part these are allowable in children's soups):

Asparagus tips

Celery tips

Cream, whipped

Ground nuts (such as almonds or pistachio nuts)

Paprika

Parsley

Peas, whole green

Slices or cubes of cooked vegetables

Shredded coconut

Garnishes for nut soups include whipped cream, ground nuts, paprika, and coconut.

Serve a cream soup in either a heated bouillon cup or a soup plate. The daintiest method, especially for luncheons and receptions, is to three-quarters fill a bouillon cup, garnish, and serve on a small plate covered with a doily.

Possible seasonings for oyster soup, page 64, include the following:

Group a:

Celery salt
Onion salt or juice
Parsley, chopped
Cayenne
Paprika
White pepper

Group b:

Bay leaf
Celery, chopped
Herbs
Mace, blade of
Onion, chopped
Pepper, sweet green, chopped

Add Group *a* seasonings to oyster soup just before it is served.

Add Group *b* seasonings to oyster soup in either of the following ways:

Simmer them in a little water, then strain and add liquid to soup.

Cook them with the fat in making white sauce (strain sauce when done).

EGGS, MEAT, AND FISH

Notes:

1. Various recipes, such as the following, are derived from the simple recipe for poached egg, page 77 (in part these are used in children's diet):

- a. Egg poached in milk or cream in place of water
- b. Egg poached in strained tomato juice in place of water. When the egg is done, place it on toast and add a spoonful of tomato juice.
- c. Egg on a tomato slice, prepared as follows:
 - (1) Dip a slice of tomato in flour and sauté it in butter.
 - (2) Place the slice of tomato on a round of buttered toast.
 - (3) Place a poached egg on the slice of tomato.
 - (4) Season and garnish.

A pretty effect is obtained by having the egg, tomato, and toast of the same diameter.

- d. Poached egg, with tomato sauce; see the recipe, page 78.

2. Various additions may be made to the recipes for scrambled eggs, scrambled-egg omelet, and Spanish eggs, pages 78-80. In general, the following are much the same as for omelets (see *Diet for Adults*, pages 141-143):

Dry seasonings
Savory additions
Garnishes

Most of the foregoing additions are not advisable for use in children's diet.

3. Possible additions to pressed chicken, page 82, include the following:

Cooked rice
Pigs'-feet jelly
Pepper, such as paprika

If preferred, prepare the chicken mold in layers, such as the following:

- a. White meat of chicken
- b. Slices of hard-cooked eggs
- c. Dark meat of chicken
- d. Slices of ham or tongue

Vary the mold in any way desired.

Veal may be substituted for part or all of the chicken.

4. Crown of lamb, page 172, is appropriate for a formal luncheon or dinner.

Forcemeat or Saratoga chips are often desirable as a filling for the roast.

Mint sauce, made by steeping the following ingredients together $\frac{1}{2}$ hr. in a warm place, is good served with crown of lamb:

- $\frac{1}{4}$ c. finely chopped mint leaves (fresh)
- 1 tb. sugar
- $\frac{1}{2}$ c. weak vinegar

Dried mint leaves may be used.

Lemon juice, diluted with water, may be substituted for vinegar.

5. Possible additions to the water in which fish is cooked (see recipe, page 82) include the following:

- Bay leaf
- Thyme
- Carrot
- Onion

Possible sauces to serve with boiled fish include pickle sauce and egg sauce.

6. If desired, stuff fish (see recipe, page 83) before it is baked, then sew together the edges of cavity. Mix together the following ingredients to make the stuffing:

- | | |
|------------------|--|
| 1 tb. | 2 c. coarse, stale bread crumbs or crisp cracker crumbs |
| $\frac{1}{2}$ t. | 3-4 tb. butter or a substitute, melted |
| $\frac{1}{4}$ t. | 1 egg, beaten slightly |
| dash | $\frac{1}{8}$ t. pepper |
| dash | $\frac{1}{3}$ t. salt |
| $\frac{1}{8}$ t. | 1 $\frac{1}{2}$ -2 t. of each of the following, chopped: |
| | Parsley |
| | Dill or other pickle |
| | Onion |
| | Capers |

to bind Cold water, if needed, to bind the materials together

For general notes on meat and fish stuffings, see *Diet for Adults*, page 31.

If desired, treat a fish as follows before baking it:

- a. Bone the fish, being careful not to break the skin.
- b. Remove most of the flesh of the fish from the skin, chop it, and mix it with the foregoing recipe for stuffing.
- c. Refill skin, and sew edges of skin together.

Note that a stuffed fish approaches the point of being a so-called complete dish.

A good class exercise consists in allowing each pupil to stuff and bake a small fish; for example, a perch or a smelt. The class recipe given for stuffing is sufficient for an average smelt.

7. Let the pupil secure a recipe for planked fish from any standard cookbook.

MISCELLANEOUS

Notes:

1. The following variations for creamed potatoes (in part suitable for children) may be used; certain of these variations also apply to other non-acid vegetables.

a. Use any of the following either as seasonings for white sauce or as garnish for the potatoes:

Cheese, cottage (see below)	Pepper, sweet green, chopped
Cheese, grated	Pickles, mild, chopped
Olives, chopped	Pimentos, chopped
Parsley, chopped	Salt, special (celery, onion, and garlic)
Pepper (such as paprika)	Watercress

b. Substitute a tomato sauce or a brown gravy for the white sauce.

c. Combine potatoes with one of the following: beets, cabbage, carrots, peas, or turnips. Potatoes, beets, and sauce, in proportions as follows, may be heated together:

- 1 c. cooked potatoes cut in $\frac{1}{2}$ " cubes
- 1 c. cooked beets cut in $\frac{1}{2}$ " cubes
- 1 c. medium white sauce:
 - 2 tb. flour
 - 2 tb. fat
 - 1 c. milk
 - Salt and pepper

2-4 tb. cottage cheese may be added to each cupful of white sauce used in various non-acid creamed and escalloped dishes (including creamed vegetables, toast, eggs, etc). As a rule, it is well to neutralize the acid in the cheese by the use of $\frac{1}{4}$ - $\frac{3}{4}$ t. soda to 1 c. cheese.¹

2. Possible variations for either cocoa or chocolate are as follows (if used with moderation, some of these variations may also be used in children's diet):

Garnishes:

- Cream, whipped (alone, or with the addition of a marshmallow)
- Marshmallow (toasted or not)
- White of egg, beaten

Additions (not garnishes):

- Cornstarch (to thicken slightly)
- Eggs, beaten or unbeaten (yolks and whites are often beaten separately)
- Malted milk
- Vanilla

Spanish chocolate (too rich for children) is made with rich milk and beaten eggs; place eggs in a bowl and add hot chocolate to them, stirring constantly.

A very nutritious cocoa is made by boiling the following ingredients together 3 min.:

- 2 tb. malted milk
- 2 t. cocoa
- $1\frac{1}{2}$ c. boiling water
- Sugar to taste

¹For further details, see "Cottage-Cheese Dishes," *Circular 109*, U.S. Department of Agriculture.

Plain cocoa and chocolate are high in caloric value; use of almost any one of the variations listed (garnishes, etc.) increases the food value.

3. A ribbon sandwich good for use with afternoon tea or coffee is made by combining the following in a way similar to the method for ribbon sandwiches, page 103:

Three slices of rye bread (gray)

Three slices of pumpernickel (black rye bread)

4. Possible additions to peanut butter when it is used as a filling for sandwiches include the following:

Oil for thinning (olive, Wesson, peanut, or corn)

Mayonnaise

French dressing (1 part oil to 1 part lemon juice)

Cream cheese

Strained tomatoes

5. A richer hermit is derived from the recipe for hermits, page 131, by the following changes:

Increase fat to $\frac{1}{2}$ c.

Increase nuts to $\frac{1}{2}$ c.

Decrease rolled oats to 1 c.

Decrease 2 eggs to 1 egg.

Shredded coconut is a possible substitute for walnut meats.

6. Alaska fritters (fried ice cream) are prepared as follows:

a. Dip a cube of hard ice cream into a thin fritter batter.

b. Brown cubes in hot deep fat. (The batter hardens quickly with the heat, and so prevents melting of the cream.)

7. The following are often of use in the lunch box:

Coffee, hot or iced

Tea, hot or iced

Meats (corned beef, ham, tongue, etc.)

Sardines

Salad (chicken, etc.)

Relishes (mustard, horse-radish, etc.)

Pickles (olives, pickled beets, etc.)

Potato chips

Doughnuts

Pie

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